CENTRIFUGAL UPBLAST ROOF EXHAUSTERS
COMMERCIAL KITCHEN APPLICATIONS
Belt Driven Model **VRBK**

DESIGNED AND ENGINEERED TO MEET INDUSTRY NEEDS

The Carnes Company series VR centrifugal upblast fan is designed and built to handle the exhaust of hot, greasy air from commercial kitchen hoods. Maximum exhaust temperature for continuous operation is 300°F. The Model VRBK fan discharges contaminated air away from supply air intakes and building exteriors. These exhaust fans can be roof or wall mounted through size 24 (with HP limitations shown below). Sizes 30-48 are to be roof mounted only.

The unique diffuser/support structure combined with the backwardly inclined wheel and deep spun venturi enable the Carnes VR series upblast fans to operate at high static pressures (up to 3 inches w.g.) as standard. The deep spun venturi is precision matched to the wheel inlet to ensure maximum air flow along with protection from entry of adverse weather elements.The air flow design of these fans has been thoroughly tested at Carnes' accredited laboratory.

Testing has also been conducted to ensure trouble-free start-up and to ensure product durability and dependability of operation.

Model **VRBK** - Sizes 06 through 24

Designed for roof or wall mounted installations except for the following:

Selections which are suitable for roof mount only-

VRBK 10 - 1½ HP	VRBK 18 - 3 HP
VRBK 12 - 1½ HP	VRBK 24 - 5 HP
VRBK 15 - 2 HP	VRBK 24 - 7½ HP

The Models VRBK sizes 06-24 incorporate the patented diffuser assembly. This unique support framework enhances the units structural integrity while increasing the static pressure capabilities up to 3 inches w. g. Housing construction is a spun aluminum outer shroud with a spark resistant wheel.

Model **VRBK** - Sizes 30 through 48

Designed for roof mounted installation only.

Models VRBK sizes 30-48 are designed with a two piece spun and shaped aluminum housing for ease of accessibility to the unit interior. Structural rigidity is accomplished by utilizing a circular welded steel support frame.

SECTION 5

▼ TYPICAL SPECIFICATIONS
VRBK Belt Drive Series

Upblast exhaust ventilators shall be of the centrifugal belt driven type. The motor compartments shall be constructed of heavy-gauge aluminum mounted on an independent support structure. The outer shroud shall have a rolled bead for added strength. The wheel and spun inlet venturi shall be a centrifugal design of non-sparking construction. For maximum performance and quiet, efficient operation, the wheel shall overlap the inlet venturi and have backward inclined blades. The wheels shall be dynamically balanced to assure smooth and vibration-free rotation under maximum loading. The complete drive assembly, including the motor and the wheel, shall be mounted on vibration isolators. Motor and drives shall be factory mounted. All fans shall be test run prior to shipment.

Motor and drives shall be isolated from the exhaust airstream. Air for cooling the motor shall be supplied to the internal motor compartment through a vent tube from a location free from discharge contaminants. Motors shall be of the heavy-duty type with permanently lubricated, sealed ball bearings. Motors shall be readily accessible for maintenance. Wheel shaft shall be ground, polished, coated with a rust inhibitive finish and mounted in heavy-duty, permanently sealed pillowblock ball bearings which are capable of 200,000 hours of life, average operation. Drives shall be sized at a minimum of 165% of driven horsepower. Drive belts shall be oil-resistant, non-static and be capable of 25,000 hours of life, average operation. Sheaves shall be fully machined cast iron or pressed steel, keyed and securely attached to the shafts. Variable pitch motor sheaves shall be standard.

The motor shall be factory wired to the disconnect switch. The disconnect shall be mounted in a listed junction box, suitable for wet locations. Wiring from the disconnect will travel through listed, flexible conduit to the motor compartment.

Horsepower and noise levels shall not exceed the published values and oversized motors will not be acceptable. Performance ratings shall be AMCA licensed for air and sound.

Centrifugal power upblast ventilators for commercial kitchen applications shall be Carnes Company Model VRBK, belt drive, sizes 06 through 48, as manufactured at Carnes Company of Verona, Wisconsin.

AMCA LICENSED AIR and SOUND DATA

Licensed to bear the AMCA Seal for both air and sound.

The Carnes Company certifies that the Model VRBK shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

UL LISTINGS

Model VRBK fans are Listed to UL Standard 762 and to ULC Standard S-645-93. File Number MH11908. UL Listing may be optional and must be specified when required.

POWER VENTILATOR FOR RESTAURANT EXHAUST APPLICANCES

CONSTRUCTION

FAN HOUSING

- Constructed with heavy-gauge aluminum.
- Designed for maximum weather protection, outer shroud prevents the entrance of inclement weather.
- Outer shroud beaded for rigidity.
- Fan plate designed to prevent the entrance of contaminated air and airborne particles into the motor compartment.
- Two piece motor cover design (lid and motor tube) allows easy access to motor, drives and bearings for maintenance.
- Drain opening is integral with upblast shroud. Optional drain fitting and grease trough capture grease and keep if off of the roof.

MOTOR/ELECTRICAL

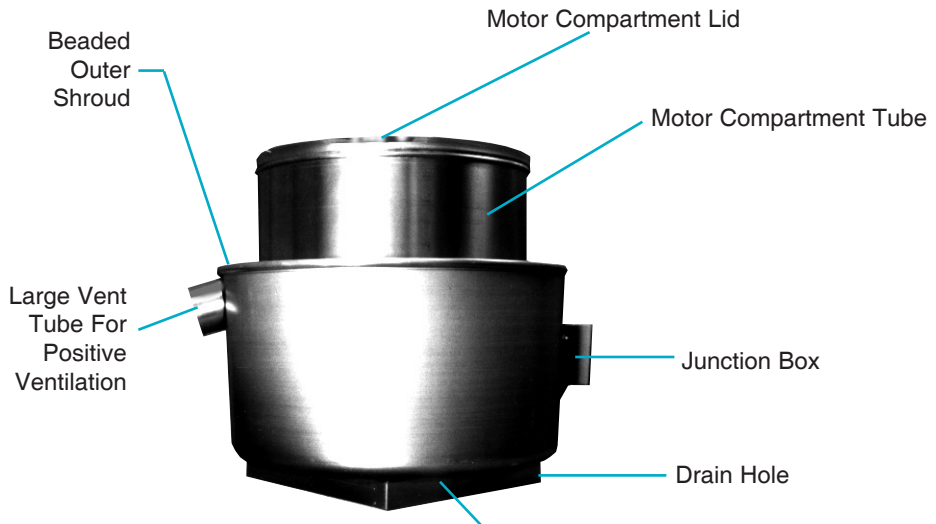
- Model VRBK fans are **UL** Listed for grease removal under Standard 762 and ULC S-645.
- All motors are **UL** or **CSA** recognized components.
- Disconnect comes mounted and wired.
- Wiring is protected by listed, flexible conduit and is external to the exhaust air stream.

MOTOR SUPPORT ASSEMBLY

- Heavy-gauge motor mounting system is bolted together and made of galvanized and galvannealed steel components.
- Easily adjustable belt tension.
- Motor plate accommodates multiple motor frames.
- Isolated from fan plate to reduce vibration and noise transmission.
- Allows horizontal adjustment of wheel.
- Electrically grounded to meet **NEC** and **UL** requirements.

MOTOR COMPARTMENT/TUBE

- Motor compartment insulated for operating temperatures to 300°F.
- Large vent tube provides positive motor cooling to maximize motor life.
- Easily removable lid and tube utilize durable threaded fastener retainers.
- Fan plate isolates motor compartment from contaminated exhaust air.
- Opening around shaft sized to allow optimum air passage to ensure proper motor compartment cooling.



Model VRBK Size 12

FEATURES

BEARINGS/SHAFT
- Dual bearings utilized to properly support the fan shaft.
- Prelubricated sealed, self-aligning.
- Rated at 200,000 hours average operation.
- Polished CRS fan shaft with rust inhibitive coating.

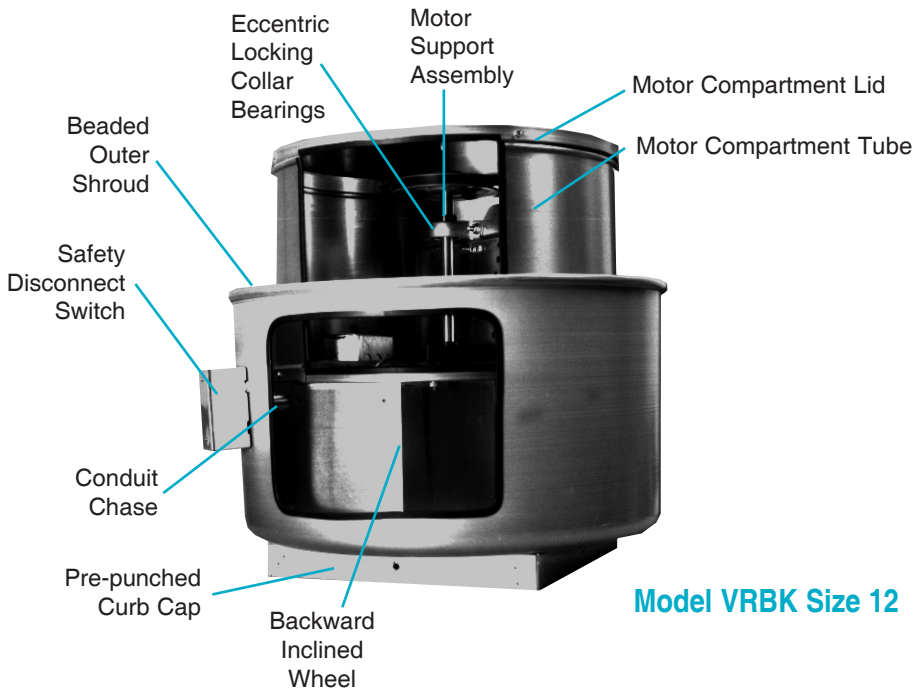
DRIVES
- Selected for 165% of the motor horsepower.
- Adjustable V-belt drives with oil resistant non-static conducting belts.
- Dual belts standard on units 5 HP and larger.
- Factory preset fan RPM.
- Adjustable sheaves allow for final air system balancing.

WHEEL
- Backward inclined wheels constructed of non-corrosive or coated heavy-gauge material. Wheel sizes 6-24 are aluminum, above 24 are steel.
- Usage of cooling fins on fan wheel backplate draws cooling air down over the motor facilitating motor longevity while motor remains out of the airstream.
- Self-limiting power characteristics.
- Dynamically balanced and test run in each individual unit.

SUPPORT STRUCTURE
Sizes 06 - 24
- Galvanized patented diffuser provides structural integrity and protection against weather penetration.
- Self-sealing diffuser fasteners prevent leakage.

Sizes 30 - 48
- Heavy-gauge coated circular steel structural frame provides strength and unit rigidity.

CURB CAP/WALL MOUNTING CAP
- One piece construction with fastened/welded, overlapping corners to ensure strength.
- Pre-punched mounting holes for ease of installation.
- Support structure attached with self-sealing fasteners.
- The deep spun venturi is precision matched to the wheel inlet to ensure maximum air flow along with protection from entry of adverse weather elements.
- VRBK sizes 06-24 up to 3 HP can be wall mounted for exhaust.



Model VRBK Size 12

GENERAL RULES TO FOLLOW

- Kitchen air pressure should be kept negative relative to dining and other areas to ensure odor control.
- The exhaust fan should be located at the discharge end of the duct run to minimize the effect of any ductwork leaks.
- Outdoor air louvers, intake and exhaust, should be located so the exhaust air is not drawn back into the system.
- On large hoods (over 12 feet long), if possible, use two small exhaust fans instead of one large fan. Benefits include uniform air distribution and the capability, depending on need, of operating one or both fans.
- Make-up air should equal 80-85% of exhausted air levels.

NFPA 96 - Standard for the Installation of Equipment for the Removal of Smoke and Grease-laden Vapors from Commercial Cooking Equipment.

REQUIREMENTS

- Air velocity through ductwork is not to be less than 1500 FPM.
- Ventilators approved and listed for commercial cooking equipment use.
- 10 feet minimum distance between exhaust fan and air intake unit.

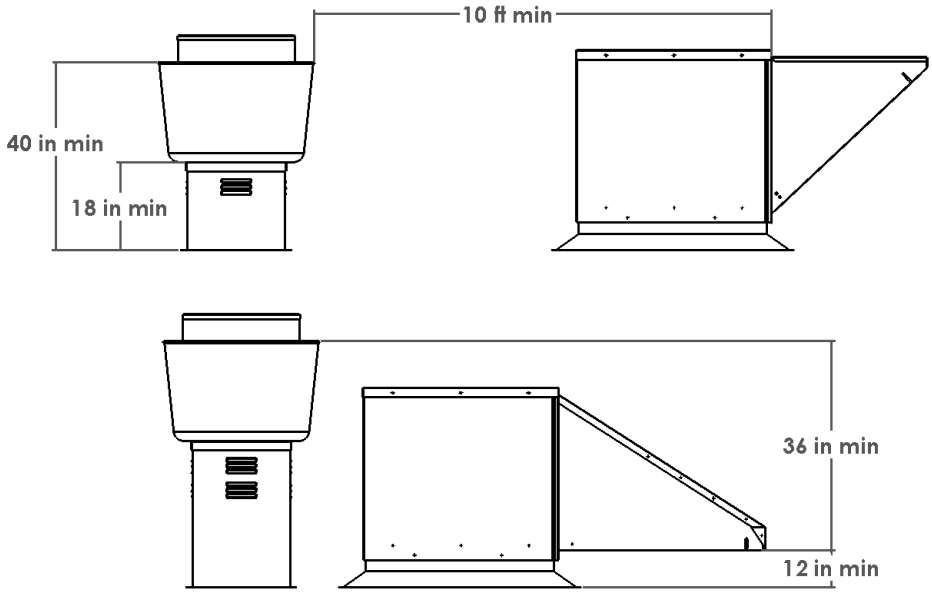
ROOFTOP TERMINATIONS

- 10 feet clearance from fan outlet to adjacent buildings and property lines.
- 40 inches minimum clearance between fan outlet and roof surface with exhaust air flow directed up.
- Ductwork extends a minimum of 18 inches above the roof surface.

WALL TERMINATIONS

- Through masonry wall with a minimum of 10 feet clearance from the outlet to adjacent buildings, property lines, combustible construction or electrical lines or equipment.
- Exhaust air flow perpendicular outward from the wall or upward.

SYSTEM DESIGN CONSIDERATIONS



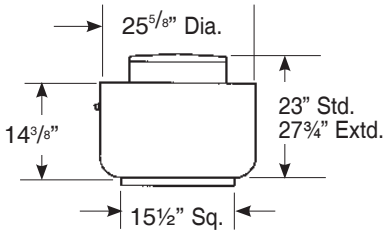
When using the VRBK for kitchen exhaust applications it is recommended that supply CFM be 80-90% of exhaust CFM. This creates a light vacuum in the kitchen keeping odors out of the dining area.

NFPA guidelines for restaurant supply and exhaust applications

- Outlet of exhaust fan must be minimum 40 inches from roof.
- Distance from roof to top of curb cap must be minimum 18 inches.
- Distance from outlet of exhaust to intake of supply must be a minimum of 10 feet.
  - Alternately, outlet of exhaust must be minimum 36 inches from top of supply intake.

**Consult your local code authority for all installation requirements.*

VRBK 06
BELT DRIVE



DESIGN DATA

Max BHP = .04 x $\left[\frac{RPM}{1000}\right]^3$

Tip Speed = 2.75 x RPM
Max. Motor Frame Size = 56
Unit Weight (less motor) = 40 lbs.
Roof Opening = 11'' Sq.
Curb O. D. = 12'' Sq.
Wall Opening = 12" Sq.

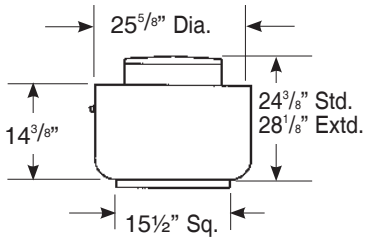
PERFORMANCE DATA

RPM Range - Motor HP	RPM	STATIC PRESSURE, INCHES W. G.											
		.000	.125	.250	.375	.500	.625	.750	1.000	1.250	1.500	1.750	2.000
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
K1 (1/6)	600	218 .01 0.8											
K2 (1/6)	700	254 .01 1.5	110 .01 1.7										
	800	290 .02 2.3	188 .02 2.2										
K3 (1/6)	900	327 .02 3.2	242 .02 2.9										
	1000	363 .03 4.0	289 .03 3.7	165 .04 3.9									
K4 (1/6)	1100	399 .04 3.8	332 .04 4.4	246 .05 4.6									
	1200	435 .05 5.6	375 .06 5.2	304 .06 5.3	179 .06 5.6								
	1300	472 .07 6.4	416 .07 8.0	356 .07 6.0	269 .08 6.2								
	1400	508 .08 7.3	456 .09 6.8	402 .09 6.7	334 .10 6.9	220 .10 7.2							
	1500	554 .01 8.1	496 .11 7.7	446 .11 7.5	389 .12 7.6	309 .12 7.9							
	1550	563 .11 8.6	516 .12 8.1	468 .12 7.9	415 .13 8.0	344 .13 8.2	232 .13 8.5						
	1600	581 .12 9.1	535 .13 8.6	489 .13 8.4	439 .14 8.4	376 .14 8.6	277 .14 8.9						
L1 (1/4)	1650	599 .13 9.5	555 .14 9.1	510 .15 8.8	464 .15 8.8	404 .16 9.0	322 .16 9.2	208 .16 9.5					
	1700	617 .15 10.0	574 .15 9.6	531 .16 9.2	486 .16 9.2	432 .17 9.3	363 .17 9.6	256 .17 9.9					
	1750	635 .16 10.5	594 .17 10.1	552 .17 9.7	508 .18 9.7	458 .18 9.7	395 .19 10.0	301 .19 10.3					
	1800	653 .18 11.0	613 .18 10.6	572 .19 10.2	530 .19 10.2	484 .20 10.2	427 .20 10.4	346 .21 10.7					
	1850	671 .19 11.5	632 .20 11.1	593 .20 10.6	552 .21 10.6	509 .21 10.6	455 .22 10.8	389 .22 11.0					
	1900	690 .21 12.0	651 .21 11.5	613 .22 11.0	573 .22 11.0	533 .23 11.0	482 .24 11.1	422 .24 11.3					
M1 (1/3)	1950	708 .22 12.4	670 .23 12.0	633 .23 11.6	595 .24 11.4	556 .25 11.4	509 .25 11.5	454 .26 11.7	283 .26 12.2				
	2000	726 .24 12.9	689 .25 12.5	653 .25 12.1	616 .26 11.9	578 .27 11.9	535 .27 11.9	484 .28 12.1	329 .28 12.6				
	2050	744 .26 13.3	708 .26 13.0	673 .27 12.6	637 .28 12.4	600 .29 12.4	560 .29 12.4	511 .30 12.5	374 .30 13.0				
	2100	762 .28 13.0	727 .28 13.5	693 .29 13.1	658 .30 12.8	622 .31 12.8	584 .31 12.8	538 .32 12.9	419 .33 13.4				
	2150	780 .30 14.4	746 .30 14.0	713 .31 13.6	678 .32 13.2	643 .33 13.3	608 .33 13.3	565 .34 13.3	459 .35 13.8	288 .35 14.2			
	2200	798 .32 14.9	765 .33 14.5	733 .33 14.1	699 .34 13.7	665 .35 13.7	630 .36 13.7	590 .36 13.8	491 .37 14.2	335 .38 14.6			

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

VRBK 08
BELT DRIVE



DESIGN DATA

Max BHP = .05 x $\left[\frac{RPM}{1000}\right]^3$

Tip Speed = 2.75 x RPM
Max. Motor Frame Size = 56
Unit Weight (less motor) = 40 lbs.
Roof Opening = 11" Sq.
Curb O. D. = 14" Sq.
Wall Opening = 12" Sq.

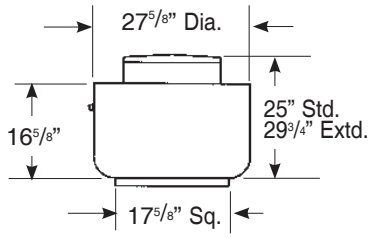
PERFORMANCE DATA

RPM Range - Motor HP	RPM	STATIC PRESSURE, INCHES W. G.											
		.000	.125	.250	.375	.500	.625	.750	1.000	1.250	1.500	1.750	2.000
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
K1 (1/6)	650	343 .01 2.3	160 .01 1.8										
K2 (1/6)	750	396 .02 3.1	259 .02 2.5										
	850	448 .02 3.9	339 .03 3.5										
K3 (1/6)	950	501 .03 4.9	408 .04 4.4	264 .04 4.3									
	1050	554 .04 5.8	471 .05 5.4	357 .05 5.0									
K4 (1/6)	1150	607 .06 6.7	531 .06 6.3	440 .07 6.0	309 .07 6.1								
	1250	659 .07 7.6	590 .08 7.2	515 .08 6.9	404 .09 6.8								
	1350	712 .09 8.6	648 .10 8.2	581 .10 7.9	492 .11 7.7	379 .11 7.8							
	1450	765 .12 9.5	705 .12 9.2	644 .13 8.9	571 .13 8.7	473 .14 8.5	354 .14 8.8						
L1 (1/4)	1500	791 .13 10.1	733 .13 9.8	675 .14 9.4	608 .14 9.2	517 .15 9.0	415 .15 9.2						
	1550	818 .14 10.6	762 .15 10.3	705 .15 10.0	645 .16 9.7	560 .16 9.5	463 .17 9.6	338 .16 9.8					
	1600	844 .16 11.2	790 .16 10.9	735 .17 10.5	678 .17 10.3	602 .18 10.1	509 .18 10.0	403 .18 10.2					
	1650	870 .17 11.7	818 .18 11.4	765 .18 11.1	710 .19 10.8	641 .19 10.6	555 .20 10.4	461 .20 10.7					
M1 (1/3)	1700	897 .19 12.3	846 .19 12.0	795 .20 11.6	741 .21 11.4	678 .21 11.2	598 .22 11.1	509 .22 11.2					
	1750	923 .21 12.9	873 .21 12.6	824 .22 12.3	773 .23 12.0	715 .23 11.8	641 .23 11.7	556 .24 11.6					
	1800	949 .22 13.4	901 .23 13.2	854 .24 12.9	804 .24 12.6	752 .25 12.4	682 .25 12.3	601 .26 12.2	403 .26 12.5				
	1850	976 .24 14.0	929 .25 13.7	882 .26 13.4	834 .26 13.2	784 .27 13.0	720 .27 12.9	645 .28 12.7	468 .28 13.0				
P1 (1/2)	1900	1002 .26 14.4	956 .27 14.2	911 .28 13.9	865 .28 13.7	816 .29 13.5	758 .30 13.4	687 .30 13.3	528 .31 13.4				
	1950	1029 .28 15.0	984 .29 14.7	940 .30 14.5	895 .31 14.2	848 .31 14.1	795 .32 14.0	729 .32 13.9	575 .33 13.8				
	2000	1055 .31 15.5	1011 .31 15.3	968 .32 15.0	925 .33 14.8	879 .34 14.6	832 .34 14.5	769 .35 14.4	622 .36 14.4	434 .35 14.7			
	2050	1081 .33 16.1	1039 .34 15.9	997 .34 15.6	955 .35 15.4	910 .36 15.2	865 .70 15.1	807 .37 15.0	668 .38 14.8	500 .38 15.1			
	2100	1108 .35 16.7	1066 .36 16.5	1025 .37 16.2	984 .38 16.0	941 .39 15.8	897 .39 15.7	844 .40 15.6	713 .41 15.3	564 .41 15.6			
	2150	1134 .38 17.3	1093 .39 17.1	1053 .40 16.9	1014 .40 16.6	972 .41 16.4	929 .42 16.3	881 .43 16.2	756 .44 15.9	615 .44 16.1			
	2200	1160 .41 17.9	1121 .42 17.7	1082 .42 17.5	1043 .43 17.3	1002 .44 17.1	961 .45 16.9	918 .45 16.8	799 .47 16.5	662 .47 16.6	488 .47 16.9		
	2250	1187 .44 18.4	1148 .45 18.2	1110 .45 18.0	1072 .46 17.8	1032 .47 17.7	992 .48 17.5	950 .48 17.4	841 .50 17.1	709 .51 17.1	553 .50 17.4		
	2300	1213 .47 19.0	1175 .48 18.8	1138 .48 18.6	1101 .49 18.4	1062 .50 18.3	1023 .51 18.1	982 .52 18.0	881 .53 17.7	755 .54 17.6	617 .54 17.9		

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

VRBK 10
BELT DRIVE



DESIGN DATA

Max BHP = .12 x $\left[\frac{RPM}{1000}\right]^3$

Tip Speed = 3.27 x RPM
Max. Motor Frame Size = 145T
Unit Weight (less motor) = 45 lbs.
Roof Opening = 13'' Sq.
Curb O. D. = 16" Sq.
Wall Opening = 14" Sq.

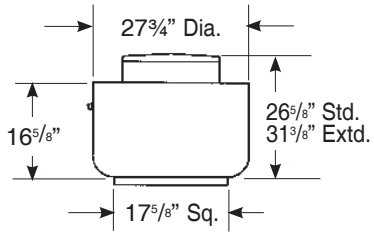
PERFORMANCE DATA

RPM Range - Motor HP	RPM	STATIC PRESSURE, INCHES W. G.											
		.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750
K1 (1/6)		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
K2 (1/6)	650	604 .02 3.1											
L1 (1/4)	750	697 .03 4.2	409 .04 3.8										
	850	790 .05 5.3	559 .06 4.5										
	950	883 .07 6.5	689 .08 5.7										
	1050	975 .09 7.5	805 .11 6.7	561 .12 6.8									
	1150	1068 .12 8.6	919 .14 7.8	715 .15 7.5									
	1200	1115 .14 9.2	972 .16 8.4	788 .17 7.9									
M1 (1/3)	1250	1161 .16 9.8	1025 .17 9.1	858 .19 8.5	630 .20 8.9								
	1300	1208 .18 10.4	1077 .19 9.7	920 .21 9.2	709 .22 9.4								
	1350	1254 .20 11.0	1128 .22 10.4	981 .24 9.8	787 .24 9.8								
P1 (1/2)	1400	1301 .22 11.7	1180 .24 11.1	1040 .26 10.5	863 .27 10.3								
	1450	1347 .24 12.4	1231 .26 11.8	1099 .29 11.2	937 .30 10.8	738 .31 11.2							
	1500	1393 .17 13.1	1281 .29 12.5	1156 .31 11.9	1008 .33 11.4	817 .34 11.8							
	1550	1440 .30 13.8	1332 .32 13.2	1213 .34 12.7	1075 .36 12.2	895 .37 12.3							
	1600	1486 .33 14.5	1382 .35 13.9	1270 .37 13.4	1137 .40 13.0	971 .41 12.9	791 .41 13.2						
R1 (3/4)	1650	1533 .36 15.2	1432 .38 14.7	1325 .41 14.1	1198 .43 13.7	1046 .44 13.5	871 .45 13.8						
	1700	1579 .39 16.0	1481 .42 15.5	1378 .44 15.0	1257 .47 14.5	1118 .48 14.1	950 .49 14.4						
	1750	1632 .40 16.8	1538 .43 16.3	1438 .45 15.8	1333 .49 15.3	1209 .50 14.9	1049 .51 15.0	869 .51 15.3					
S1 (1)	1800	1679 .41 17.6	1588 .44 17.1	1491 .47 16.6	1389 .50 16.2	1276 .52 15.8	1126 .53 15.7	955 .54 16.0					
	1850	1726 .45 18.4	1637 .48 17.9	1544 .51 17.4	1444 .54 17.0	1341 .56 16.6	1203 .58 16.4	1040 .58 16.7					
	1900	1772 .49 19.2	1686 .52 18.7	1597 .55 18.2	1499 .58 17.8	1399 .60 17.4	1274 .62 17.1	1122 .63 17.3	956 .63 17.6				
T1 (1-1/2)	1950	1819 .53 20.0	1735 .56 19.5	1649 .59 19.0	1553 .62 18.5	1458 .64 18.1	1342 .67 17.7	1200 .68 17.8	1042 .68 18.1				
	2000	1866 .57 21.0	1784 .60 20.0	1700 .63 19.6	1607 .66 19.1	1515 .69 18.8	1410 .71 18.4	1277 .73 18.3	1126 .73 18.6	968 .74 18.8			
	2050	1912 .61 21.0	1833 .64 21.0	1750 .68 20.0	1661 .71 19.8	1572 .74 19.4	1476 .76 19.1	1352 .78 18.8	1208 .79 19.0	1054 .79 19.3			
	2100	1959 .66 22.0	1881 .69 21.0	1801 .72 21.0	1715 .76 20.0	1628 .79 20.0	1536 .81 19.7	1421 .84 19.4	1287 .85 19.5	1140 .85 19.8			
	2150	2005 .71 23.0	1930 .74 22.0	1852 .77 22.0	1768 .81 21.0	1683 .84 21.0	1595 .87 20.0	1489 .89 20.0	1364 .91 20.0	1224 .91 20.0	1076 .92 20.0		
	2200	2052 .76 23.0	1978 .79 23.0	1902 .82 22.0	1822 .86 22.0	1738 .89 21.0	1653 .92 21.0	1556 .95 21.0	1440 .97 21.0	1305 .97 21.0	1162 .98 21.0		
	2250	2099 .81 24.0	2027 .84 24.0	1952 .88 23.0	1875 .92 23.0	1792 .95 22.0	1710 .98 22.0	1623 1.01 21.0	1510 1.03 21.0	1383 1.04 21.0	1247 1.05 22.0	1106 1.05 22.0	
	2350	2192 .92 26.0	2123 .96 25.0	2052 .99 25.0	1980 1.04 24.0	1900 1.07 24.0	1822 1.10 23.0	1741 1.13 23.0	1646 1.16 22.0	1536 1.18 22.0	1410 1.19 23.0	1278 1.19 23.0	1143 1.20 23.0
	2450	2285 1.04 27.0	2219 1.08 27.0	2151 1.12 26.0	2082 1.16 26.0	2007 1.20 25.0	1932 1.24 25.0	1856 1.27 24.0	1777 1.30 24.0	1675 1.32 24.0	1565 1.34 24.0	1444 1.34 24.0	1315 1.35 24.0

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

VRBK 12
BELT DRIVE



DESIGN DATA

Max BHP = .15 x $\left[\frac{RPM}{1000}\right]^3$

Tip Speed = 2.27 x RPM
Max. Motor Frame Size = 145T
Unit Weight (less motor) = 45 lbs.
Roof Opening = 13" Sq.
Curb O. D. = 16" Sq.
Wall Opening = 14" Sq.

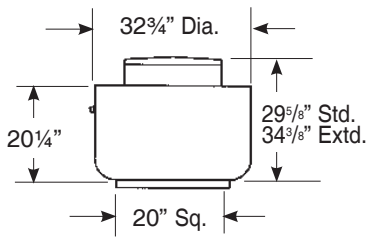
PERFORMANCE DATA

RPM Range - Motor HP	RPM	STATIC PRESSURE, INCHES W. G.											
		.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750
K1 (1/6)		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
K2 (1/6)	550	680 .02 2.1											
K3 (1/6)	650	804 .03 4.2											
L1 (1/4)	750	927 .05 4.4	560 .06 3.8										
	850	1051 .07 5.8	757 .08 5.0										
M1 (1/3)	950	1174 .10 7.1	925 .11 6.2										
	1050	1298 .13 8.2	1080 .15 7.5	761 .15 7.3									
P1 (1/2)	1100	1360 .15 8.8	1153 .17 8.1	880 .18 7.8									
	1200	1483 .19 9.9	1295 .22 9.4	1067 .23 8.8									
R1 (3/4)	1250	1545 .22 10.5	1365 .24 10.1	1155 .26 9.2	816 .25 9.6								
	1300	1607 .25 11.3	1434 .27 10.8	1240 .29 10.0	973 .29 10.2								
S1 (1)	1350	1669 .28 12.2	1505 .30 11.6	1319 .32 10.8	1084 .32 10.8								
	1450	1793 .34 13.8	1644 .37 13.2	1474 .39 12.5	1272 .40 12.1	964 .39 12.4							
T1 (1-1/2)	1500	1854 .38 14.7	1713 .41 14.1	1550 .43 13.5	1361 .44 12.8	1120 .44 13.1							
	1550	1916 .42 15.6	1781 .45 15.1	1623 .47 14.4	1448 .49 13.6	1233 .49 13.8							
	1600	1978 .46 16.5	1850 .49 16.0	1694 .52 15.4	1531 .53 14.6	1333 .54 14.6	1008 .52 14.9						
	1650	2040 .51 17.4	1917 .54 17.0	1765 .56 16.4	1610 .58 15.6	1425 .59 15.4	1171 .59 15.6						
	1700	2102 .55 18.4	1983 .59 17.9	1835 .61 17.4	1688 .63 16.6	1515 .65 16.2	1306 .65 16.4						
	1750	2198 .57 19.4	2064 .60 18.9	1946 .63 18.5	1804 .65 17.7	1640 .67 17.0	1446 .68 17.2	1170 .66 17.4					
	1800	2260 .62 21.0	2131 .65 19.9	2017 .68 19.5	1880 .70 18.7	1726 .73 17.9	1544 .74 18.0	1316 .73 18.2					
	1900	2386 .73 22.0	2265 .76 22.0	2158 .79 21.0	2029 .82 21.0	1895 .84 19.5	1732 .87 19.2	1550 .87 19.4	1293 .85 19.6				
	1950	2449 .79 23.0	2332 .82 23.0	2225 .85 22.0	2103 .88 22.0	1975 .91 21.0	1822 .93 19.8	1649 .94 20.0	1438 .93 21.0				
	2000	2512 .85 23.0	2398 .88 23.0	2291 .92 23.0	2177 .95 22.0	2052 .97 22.0	1908 1.00 21.0	1745 1.01 21.0	1571 1.02 21.0	1290 .99 21.0			
	2050	2574 .92 24.0	2464 .95 24.0	2358 .99 24.0	2249 1.02 23.0	2128 1.04 22.0	1993 1.07 22.0	1839 1.09 22.0	1670 1.09 22.0	1437 1.08 22.0			
	2100	2637 .99 25.0	2530 1.02 24.0	2424 1.06 24.0	2321 1.09 24.0	2203 1.12 23.0	2078 1.14 23.0	1932 1.17 22.0	1769 1.17 22.0	1581 1.17 23.0	1305 1.13 23.0		
	2200	2763 1.13 26.0	2662 1.17 26.0	2556 1.21 25.0	2464 1.24 25.0	2352 1.27 24.0	2238 1.30 24.0	2106 1.33 24.0	1960 1.34 24.0	1802 1.35 24.0	1598 1.34 24.0		
	2250	2826 1.21 27.0	2728 1.25 26.0	2622 1.29 26.0	2535 1.33 26.0	2426 1.36 26.0	2315 1.38 25.0	2191 1.41 24.0	2053 1.44 24.0	1900 1.44 24.0	1741 1.45 24.0	1484 1.41 25.0	
	2300	2888 1.29 28.0	2794 1.33 27.0	2687 1.37 27.0	2606 1.41 27.0	2500 1.44 26.0	2391 1.47 25.0	2275 1.50 25.0	2143 1.53 24.0	1997 1.54 25.0	1845 1.54 25.0	1630 1.52 25.0	

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

VRBK 15
BELT DRIVE



DESIGN DATA

Max BHP = .33 x $\left[\frac{RPM}{1000}\right]^3$

Tip Speed = 4.06 x RPM
Max. Motor Frame Size = 182T
Unit Weight (less motor) = 65 lbs.
Roof Opening = 16" Sq.
Curb O. D. = 19" Sq.
Wall Opening = 17" Sq.

PERFORMANCE DATA

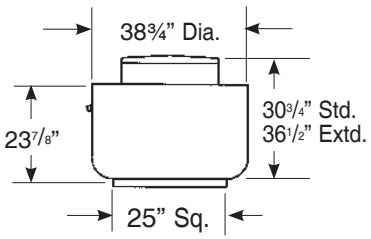
RPM Range - Motor HP	RPM	STATIC PRESSURE, INCHES W. G.											
		.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750
K1 (1/6)		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
K2 (1/4)	550	1211 .06 3.7	278 .05 3.1										
	600	1321 .08 4.4	735 .08 3.7										
L1 (1/4)	650	1431 .10 5.2	944 .11 4.5										
M1 (1/3)	700	1542 .12 6.1	1103 .14 5.4										
	750	1652 .15 6.9	1245 .17 6.2										
	800	1762 .19 7.6	1383 .20 6.9	688 .18 6.7									
	850	1925 .19 8.2	1562 .21 7.6	1093 .21 7.0									
	900	2038 .23 9.0	1699 .25 8.4	1308 .26 7.7									
P1 (1/2)	950	2152 .27 9.9	1834 .29 9.2	1477 .30 8.6	648 .25 9.0								
	1000	2265 31 10.8	1967 .33 10.2	1633 .35 9.5	1096 .33 9.5								
R1 (3/4)	1050	2378 .36 11.8	2098 .38 11.2	1782 .40 10.6	1387 .40 10.1								
	1100	2491 .42 12.8	2228 .44 12.3	1925 .46 11.7	1593 .47 10.9	781 .39 11.7							
	1150	2604 .47 13.9	2357 .50 13.3	2065 .52 12.7	1766 .53 12.0	1237 .50 12.2							
S1 (1)	1200	2718 .54 15.0	2482 .57 14.5	2203 .59 14.0	1923 .60 13.2	1535 .60 12.8							
	1250	2883 .59 16.2	2666 .63 15.7	2428 .65 15.2	2165 .66 14.4	1850 .66 13.6	1318 .62 14.4						
	1300	2998 .67 17.3	2792 .70 16.8	2561 .73 16.4	2316 .74 15.7	2043 .75 14.9	1652 .73 15.1						
T1 (1-1/2)	1400	3229 .84 19.8	3038 .87 19.3	2826 .90 18.9	2619 .92 18.3	2369 .93 17.5	2078 .93 16.7	1650 .89 17.4					
	1450	3344 .93 21.0	3160 .97 20.0	2957 .99 19.9	2756 1.01 19.3	2519 1.03 18.5	2270 1.04 17.7	1944 1.03 17.9	1360 .94 19.0				
	1500	3459 1.03 22.0	3282 1.07 21.0	3087 1.10 21.0	2891 1.12 20.0	2671 1.13 19.5	2450 1.15 18.7	2144 1.14 18.2	1701 1.09 19.4				
	1550	3574 1.13 23.0	3403 1.18 22.0	3216 1.21 22.0	3024 1.23 21.0	2824 1.25 21.0	2603 1.27 19.8	3430 1.27 19.1	2032 1.25 19.7	1453 1.14 21.0			
V1 (2)	1600	3690 1.25 24.0	3524 1.29 23.0	3345 1.32 23.0	3157 1.35 22.0	2974 1.37 22.0	2754 1.38 21.0	2531 1.40 20.0	2236 1.39 20.0	1794 1.32 21.0			
	1650	3805 1.37 25.0	3644 1.41 24.0	3472 1.45 24.0	3290 1.48 23.0	3117 1.50 23.0	2903 1.51 22.0	2705 1.54 21.0	2433 1.53 21.0	2126 1.50 22.0	1583 1.39 23.0		
	1700	3920 1.50 25.0	3764 1.55 25.0	3599 1.58 25.0	3422 1.61 24.0	3252 1.63 24.0	3057 1.65 23.0	2858 1.67 22.0	2627 1.68 22.0	2348 1.66 22.0	1923 1.58 23.0		
	1725	3978 1.56 26.0	3824 1.61 25.0	3663 1.65 25.0	3488 1.68 25.0	3319 1.70 24.0	3133 1.72 23.0	2933 1.74 23.0	2722 1.76 22.0	2448 1.74 22.0	2089 1.69 23.0	1570 1.56 24.0	
	1750	4036 1.63 26.0	3884 1.68 26.0	3726 1.72 25.0	3554 1.75 25.0	3386 1.78 25.0	3208 1.79 24.0	3008 1.81 23.0	2817 1.84 23.0	2546 1.82 22.0	2254 1.79 23.0	1742 1.67 25.0	
	1800	4151 1.78 27.0	4004 1.83 27.0	3852 1.87 26.0	3684 1.90 26.0	3520 1.93 26.0	3359 1.95 25.0	3157 1.96 24.0	2976 1.99 24.0	2741 1.99 23.0	2478 1.97 24.0	2080 1.89 25.0	1583 1.76 26.0
	1850	4266 1.93 28.0	4123 1.93 28.0	3977 2.02 27.0	3814 2.06 27.0	3652 2.09 26.0	3499 2.11 26.0	3311 2.13 25.0	3128 2.15 25.0	2932 2.17 24.0	2677 2.15 24.0	2411 2.13 25.0	1927 1.99 26.0
	1900	4382 2.09 29.0	4242 2.15 29.0	4101 2.19 28.0	3943 2.22 28.0	3785 2.26 27.0	3634 2.28 27.0	3463 2.30 26.0	3279 2.32 26.0	3107 2.35 25.0	2872 2.34 25.0	2623 2.32 25.0	2263 2.24 27.0

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

VRBK 18
BELT DRIVE

PERFORMANCE DATA



DESIGN DATA

Max BHP = .63 x $\left[\frac{RPM}{1000}\right]^3$

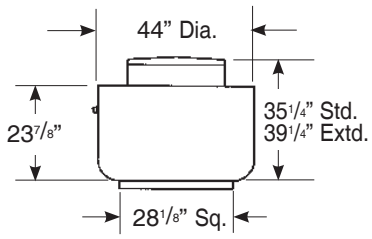
Tip Speed = 4.94 x RPM
Max. Motor Frame Size = 184T
Unit Weight (less motor) = 85 lbs.
Roof Opening = 20-1/2" Sq.
Curb O. D. = 23-1/2" Sq.
Wall Opening = 22" Sq.

RPM Range - Motor HP	RPM	STATIC PRESSURE, INCHES W. G.											
		.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750
K1 (1/6)		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
L1 (1/4)	550	1989 .12 5.1	1223 .12 3.4										
M1 (1/3)	600	2170 .16 6.1	1509 .16 4.3										
	650	2351 .20 7.0	1750 .21 5.2	739 .17 4.8									
P1 (1/2)	700	2532 .25 7.9	1982 .26 6.1	1197 .24 5.5									
R1 (3/4)	750	2713 .31 8.7	2209 .32 6.9	1554 .31 6.2									
	800	2899 .33 9.6	2455 .35 7.9	1912 .35 7.1	1061 .29 7.1								
S1 (1)	850	3080 .40 10.6	2668 .42 9.0	2168 .42 8.1	1468 .38 7.8								
	900	3261 .48 11.6	2879 .50 10.2	2416 .50 9.2	1830 .48 8.6								
T1 (1-1/2)	950	3442 .56 12.9	3087 .59 11.4	2661 .59 10.3	2184 .58 9.5	1445 .51 9.5							
	1000	3623 .65 14.2	3293 .68 12.7	2902 .69 11.5	2446 .68 10.7	1829 .63 10.5							
	1050	3805 .76 15.4	3497 .79 14.1	3122 .80 12.7	2700 .79 11.9	2190 .76 11.4	1514 .68 11.4						
	1100	3986 .87 16.9	3696 .91 15.4	3338 .92 14.0	2948 .92 13.2	2540 .90 12.4	1915 .83 12.4						
	1150	4167 .99 18.3	3886 1.03 16.9	3552 1.04 15.5	3194 1.05 14.5	2800 1.04 13.8	2276 .98 13.4	1657 .89 13.5					
	1175	4257 1.06 19.0	3981 1.10 17.6	3658 1.11 16.2	3315 1.12 15.2	2928 1.11 14.4	2457 1.07 13.9	1864 .98 14.0					
V1 (2)	1200	4348 1.13 19.7	4076 1.17 18.4	3764 1.18 17.0	3436 1.20 15.9	3055 1.18 15.1	2634 1.15 14.4	2061 1.07 14.5	1432 .96 14.6				
	1225	4477 1.17 20.0	4201 1.20 19.1	3902 1.22 17.7	3583 1.23 16.5	3232 1.23 15.8	2821 1.21 15.0	2309 1.14 15.0	1701 1.02 15.1				
	1250	4568 1.24 21.0	4298 1.27 19.7	4006 1.29 18.3	3697 1.30 17.1	3358 1.30 16.4	2974 1.29 15.7	2490 1.23 15.6	1918 1.12 15.7				
	1275	4660 1.32 22.0	4396 1.34 20.0	4109 1.37 19.0	3810 1.38 17.7	3483 1.39 17.0	3126 1.38 16.3	2669 1.33 16.0	2132 1.23 16.1				
	1300	4751 1.40 22.0	4493 1.42 21.0	4212 1.45 19.6	3922 1.47 18.3	3606 1.47 17.6	3257 1.46 17.0	2829 1.42 16.5	2323 1.33 16.6	1734 1.12 16.8			
	1325	4843 1.48 23.0	4590 1.51 21.0	4315 1.54 20.0	4032 1.55 18.9	3724 1.56 18.3	3387 1.55 17.6	2985 1.52 17.0	2507 1.44 17.1	1953 1.32 17.0			
W1 (3)	1350	4934 1.57 23.0	4687 1.59 22.0	4417 1.62 21.0	4140 1.64 19.6	3840 1.64 18.9	3515 1.64 18.2	3140 1.62 17.6	2689 1.55 17.6	2168 1.44 17.7			
	1375	5025 1.65 24.0	4784 1.68 23.0	4518 1.71 22.0	4248 1.73 20.0	3956 1.74 19.5	3641 1.73 18.9	3293 1.72 18.2	2868 1.67 18.1	2373 1.56 18.2	1805 1.42 18.4		
	1400	5117 1.75 25.0	4880 1.77 23.0	4620 1.81 22.0	4355 1.83 21.0	4071 1.83 20.0	2767 1.83 19.5	3443 1.82 18.9	3029 1.78 18.5	2559 1.68 18.7	2025 1.55 18.8		
	1425	5208 1.84 25.0	4977 1.87 24.0	4721 1.91 23.0	4461 1.92 22.0	4185 1.93 21.0	2892 1.93 20.0	3573 1.93 19.5	3186 1.89 19.0	2742 1.80 19.2	2241 1.68 19.3		
	1450	5299 1.94 26.0	5073 1.97 25.0	4821 2.01 23.0	4567 2.03 22.0	4299 2.03 21.0	4015 2.04 21.0	3702 2.03 20.0	3341 2.03 19.6	2923 1.93 19.6	2454 1.80 19.8	1908 1.67 20.0	
	1475	5391 2.04 26.0	5169 2.07 25.0	4922 2.11 24.0	4673 2.13 23.0	4411 2.14 22.0	4133 2.15 21.0	3830 2.14 21.0	3495 2.12 20.0	3101 2.07 20.0	2641 1.95 20.0	2128 1.81 20.0	
	1500	5482 2.15 27.0	5265 2.17 26.0	5022 2.22 25.0	4778 2.24 24.0	4524 2.25 23.0	4250 2.26 22.0	3957 2.25 21.0	3646 2.24 21.0	3259 2.19 21.0	2825 2.09 21.0	2344 1.95 21.0	
	1525	5574 2.26 28.0	5360 2.28 27.0	5122 2.33 25.0	4882 2.35 24.0	4634 2.36 23.0	4366 2.37 23.0	4083 2.37 22.0	3786 2.36 21.0	3416 2.31 21.0	3007 2.23 21.0	2557 2.10 21.0	2039 1.95 22.0
	1550	5665 2.37 28.0	5455 2.40 27.0	5221 2.44 26.0	4985 2.47 25.0	4742 2.48 24.0	4481 2.49 23.0	4208 2.49 23.0	3915 2.48 22.0	3571 2.44 22.0	3187 2.38 22.0	2748 2.25 22.0	2258 2.10 22.0
	1575	5756 2.49 29.0	5550 2.51 28.0	5320 2.56 27.0	5088 2.59 26.0	4850 2.60 25.0	4596 2.61 24.0	4332 2.61 23.0	4044 2.60 23.0	3725 2.58 22.0	3356 2.52 22.0	2933 2.40 22.0	2474 2.26 23.0

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

VRBK 21
BELT DRIVE



DESIGN DATA

Max BHP = 1.28 x $\left[\frac{\text{RPM}}{1000}\right]^3$

Tip Speed = 5.76 x RPM
Max. Motor Frame Size = 184T
Unit Weight (less motor) = 120 lbs.
Roof Opening = 23-1/2" Sq.
Curb O. D. = 26-1/2" Sq.
Wall Opening = 25" Sq.

PERFORMANCE DATA

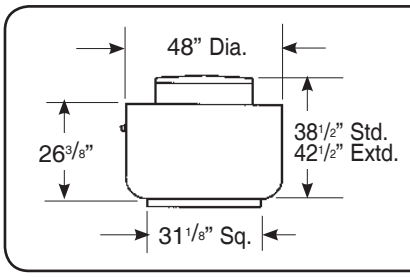
RPM Range - Motor HP	RPM	STATIC PRESSURE, INCHES W. G.											
		.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750
L1 (1/4)		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
M1 (1/3)	400	2168 .08 4.2	728 .06 3.3										
	450	2439 .11 5.3	1443 .11 4.2										
P1 (1/2)	500	2709 .15 6.4	1883 .15 5.3										
	550	2980 .20 7.6	2261 .21 6.4	329 .10 6.1									
	600	3251 .26 8.8	2614 .27 7.4	1608 .25 7.1									
R1 (3/4)	650	3522 .34 10.0	2941 .35 8.6	2163 .34 8.2									
S1 (1)	700	3793 .42 11.2	3261 .43 9.9	2602 .42 9.4	1401 .35 9.3								
	750	4064 .52 12.6	3575 .53 11.3	2992 .53 10.7	2162 .50 10.5								
T1 (1-1/2)	800	4335 .63 14.0	3884 .65 12.8	3360 .65 12.0	2685 .63 11.8	1456 .50 11.7							
	850	4606 .75 15.6	4189 .77 14.4	3707 .78 13.4	3124 .75 13.2	2297 .71 13.1							
	875	4742 .82 16.4	4339 .84 15.2	3872 .85 14.1	3336 .84 13.9	2603 .80 13.8	812 .48 13.7						
	900	4877 .89 17.2	4485 .92 16.0	4035 .93 14.9	3525 .92 14.7	2886 .89 14.5	1737 .73 14.4						
	925	5012 .97 18.1	4631 .99 16.9	4197 1.00 15.7	3713 1.00 15.4	3111 .97 15.2	2162 .87 15.1						
	950	5148 1.05 18.9	4777 1.08 17.7	4358 1.09 16.6	3897 1.09 16.1	3333 1.06 15.9	2563 .99 15.8						
V1 (2)	975	5283 1.13 19.8	4921 1.16 18.6	4517 1.17 17.5	4080 1.18 16.9	3551 1.13 16.7	2871 1.11 16.6	1690 .87 16.6					
	1000	5419 1.22 21.0	5066 1.25 19.5	4676 1.27 18.4	4261 1.27 17.7	3766 1.24 17.6	3164 1.21 17.4	2152 1.15 17.4					
	1050	5690 1.41 22.0	5353 1.44 21.0	4989 1.46 20.0	4599 1.47 19.4	4152 1.46 19.2	3619 1.43 19.1	2930 1.36 19.0	1764 1.07 19.0				
	1075	5825 1.52 23.0	5497 1.55 22.0	5145 1.57 21.0	4764 1.58 20.0	4338 1.57 20.0	3839 1.51 20.0	3227 1.49 19.9	2240 1.42 19.8				
	1100	5961 1.62 24.0	5639 1.66 23.0	5300 1.68 22.0	4927 1.69 21.0	4523 1.69 21.0	4056 1.63 21.0	3513 1.62 21.0	2648 1.48 21.0	657 .78 21.0			
W1 (3)	1125	6096 1.74 25.0	5782 1.77 24.0	5454 1.80 23.0	5089 1.81 22.0	4705 1.81 22.0	4270 1.76 22.0	3740 1.74 22.0	3047 1.65 22.0	1935 1.33 22.0			
	1150	6232 1.86 26.0	5924 1.89 25.0	5607 1.92 24.0	5251 1.93 23.0	4886 1.93 23.0	4461 1.92 23.0	3963 1.88 23.0	3354 1.82 22.0	2408 1.73 22.0			
	1175	6367 1.98 27.0	6066 2.02 26.0	5759 2.05 25.0	5411 2.06 24.0	5062 2.06 23.0	4650 2.05 23.0	4183 1.97 23.0	3648 1.95 23.0	2815 1.80 23.0	1146 1.18 23.0		
	1200	6503 2.11 28.0	6208 2.15 27.0	5911 2.18 26.0	5570 2.19 25.0	5228 2.20 24.0	4836 2.19 24.0	4400 2.12 24.0	3903 2.11 24.0	3215 1.99 24.0	2184 1.68 24.0		
	1225	6638 2.24 29.0	6349 2.28 28.0	6063 2.32 27.0	5728 2.33 26.0	5394 2.34 25.0	5021 2.33 25.0	4615 2.27 25.0	4128 2.26 25.0	3533 2.19 25.0	2640 2.11 25.0		
	1250	6774 2.38 30.0	6490 2.42 29.0	6210 2.46 27.0	5886 2.47 27.0	5558 2.48 26.0	5204 2.48 26.0	4813 2.46 26.0	4350 2.41 26.0	3828 2.36 26.0	3046 2.18 26.0	2009 1.82 26.0	
	1275	6909 2.53 30.0	6631 2.57 29.0	6356 2.61 28.0	6042 2.62 28.0	5721 2.63 27.0	5385 2.63 27.0	5002 2.62 27.0	4569 2.52 27.0	4101 2.52 27.0	3445 2.39 26.0	2499 2.10 26.0	
	1300	7045 2.68 31.0	6772 2.72 30.0	6502 2.76 29.0	6198 2.78 28.0	5883 2.79 28.0	5566 2.80 27.0	5190 2.78 27.0	4786 2.70 27.0	4327 2.69 27.0	3756 2.62 27.0	2926 2.53 27.0	1320 1.63 27.0
	1325	7180 2.84 32.0	6912 2.88 31.0	6648 2.92 30.0	6353 2.94 29.0	6044 2.95 29.0	5735 2.96 28.0	5375 2.95 28.0	5001 2.88 28.0	4550 2.87 28.0	4051 2.81 28.0	3330 2.62 28.0	2383 2.24 28.0
	1350	7316 3.00 33.0	7053 3.04 32.0	6793 3.08 31.0	6508 3.11 30.0	6204 3.12 30.0	5901 3.13 29.0	5560 3.12 29.0	5198 3.10 29.0	4771 3.05 29.0	4328 2.99 29.0	3716 2.89 29.0	2848 2.81 29.0
	1375	7451 3.17 34.0	7193 3.22 33.0	6938 3.26 32.0	6662 3.28 31.0	6364 3.29 31.0	6066 3.30 30.0	5742 3.30 30.0	5387 3.28 30.0	4989 3.18 30.0	4555 3.18 30.0	4015 3.10 30.0	3256 2.88 30.0

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

VRBK 24
BELT DRIVE

PERFORMANCE DATA



DESIGN DATA

Max BHP = 3.26 x $\left[\frac{RPM}{1000}\right]^3$

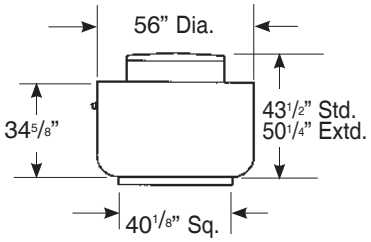
Tip Speed = 6.68 x RPM
Max. Motor Frame Size = 254T
Unit Weight (less motor) = 150 lbs.
Roof Opening = 26-1/2" Sq.
Curb O. D. = 29-1/2" Sq.
Wall Opening = 28" Sq.

RPM Range - Motor HP	RPM	STATIC PRESSURE, INCHES W. G.											
		.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750
M1 (1/3)		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
P1 (1/2)	400	3618 .21 6.5	2241 .19 5.0										
	425	3845 .25 7.3	2595 .24 5.7										
	450	4070 .29 8.2	2927 .29 6.5										
	475	4298 .34 8.9	3247 .34 7.1										
R1 (3/4) S1 (1)	500	4523 4.0 9.7	3559 .40 7.8	1907 .33 7.3									
	525	4750 .47 10.4	3848 .47 8.6	2484 .42 7.9									
	550	4975 .54 11.2	4125 .54 9.4	2942 .50 8.7									
	575	5201 .61 12.0	4398 .62 10.3	3303 .58 9.5									
	600	5427 .70 12.9	4667 .70 11.2	3655 .67 10.3	1941 .53 9.9								
T1 (1-1/2)	625	5653 .79 13.8	4934 .80 12.2	3991 .77 11.2	2664 .67 10.7								
	650	5879 .88 14.6	5197 .90 13.2	4315 .87 12.1	3173 .78 11.5								
	675	6105 .99 15.5	5458 1.01 14.1	4633 .98 13.0	3623 .92 12.4	1346 .59 12.2							
	700	6332 1.10 16.5	5711 1.12 15.1	4945 1.10 13.9	3985 1.04 13.4	2504 .88 13.0							
V1 (2)	725	6558 1.23 17.7	5959 1.25 16.1	5247 1.24 14.9	4339 1.18 14.4	3162 1.06 13.9							
	750	6784 1.36 18.8	6205 1.38 17.2	5526 1.38 16.0	4686 1.32 15.4	3654 1.20 14.9							
	775	7010 1.50 19.9	6450 1.52 18.3	5803 1.52 17.1	5013 1.47 16.4	4111 1.37 15.9	2520 1.14 15.7						
W1 (3)	800	7236 1.65 21.0	6693 1.67 19.5	6077 1.68 18.2	5335 1.63 17.5	4482 1.55 17.1	3261 1.39 16.8						
	825	7462 1.81 22.0	6936 1.83 21.0	6348 1.83 19.4	5653 1.80 18.6	4839 1.73 18.3	3833 1.61 17.9	1535 1.04 17.9					
	850	7688 1.98 23.0	7178 2.00 22.0	6616 2.00 21.0	5966 1.97 19.7	5189 1.91 19.4	4296 1.77 19.0	2799 1.52 18.9					
	875	7914 2.16 25.0	7418 2.18 23.0	6883 2.19 22.0	6275 2.16 21.0	5528 2.10 20.0	4730 2.00 20.0	3537 1.81 20.0					
X1 (5)	900	8141 2.35 26.0	7658 2.37 24.0	7148 2.38 23.0	6561 2.37 22.0	5854 2.31 22.0	5092 2.22 21.0	4129 2.08 21.0	2244 1.56 21.0				
	950	8595 2.76 28.0	8136 2.79 27.0	7671 2.81 25.0	7116 2.80 24.0	6494 2.74 24.0	5797 2.67 23.0	5050 2.52 23.0	3948 2.34 23.0				
Y1 (7-1/2)	1000	9045 3.22 30.0	8611 3.25 29.0	8177 3.28 28.0	7662 3.28 27.0	7118 3.22 26.0	6464 3.16 25.0	5779 3.06 25.0	4978 2.87 25.0	3813 2.62 25.0			
	1050	9497 3.73 33.0	9084 3.76 31.0	8671 3.79 30.0	8199 3.78 29.0	7697 3.77 28.0	7107 3.69 28.0	6480 3.61 27.0	5810 3.49 27.0	4969 3.34 27.0	3756 2.97 27.0		
Roof Mount Only	1075	9723 4.00 34.0	9320 4.03 33.0	8916 4.06 31.0	8465 4.06 30.0	7975 4.06 29.0	7423 3.98 29.0	6814 3.91 28.0	6169 3.79 28.0	5431 3.58 28.0	4419 3.38 28.0	2636 2.64 28.0	
	1100	9550 4.28 35.0	9555 4.32 34.0	9160 4.35 33.0	8730 4.35 32.0	8250 4.35 31.0	7735 4.28 30.0	7141 4.21 30.0	6523 4.11 29.0	5884 3.98 29.0	5014 3.80 29.0	3711 3.33 29.0	
	1125	10176 4.58 36.0	9790 4.62 35.0	9404 4.65 34.0	8993 4.66 33.0	8524 4.66 32.0	8044 4.59 31.0	7463 4.52 31.0	6873 4.43 30.0	6247 4.30 30.0	5480 4.05 30.0	4446 3.80 30.0	2602 2.94 30.0
	1150	10402 4.90 38.0	10024 4.93 37.0	9647 4.96 35.0	9255 4.98 34.0	8796 4.99 33.0	8337 4.94 32.0	7782 4.85 32.0	7217 4.77 32.0	6606 4.65 31.0	5940 4.42 31.0	5093 4.27 31.0	3756 3.75 31.0
Roof Mount Only	1175	10628 5.22 39.0	10258 5.26 38.0	9889 5.29 37.0	9515 5.32 36.0	9066 5.29 35.0	8617 5.28 34.0	8098 5.19 33.0	7542 5.12 33.0	6960 5.00 33.0	6361 4.86 32.0	5575 4.68 32.0	4534 4.27 32.0
	1200	10854 5.56 40.0	10492 5.60 39.0	10131 5.63 38.0	9769 5.67 37.0	9335 5.64 36.0	8895 5.64 35.0	8411 5.55 35.0	7866 5.47 34.0	7310 5.37 34.0	6724 5.23 34.0	6038 4.97 33.0	5184 4.81 33.0

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

VRBK 30
BELT DRIVE



DESIGN DATA

Max BHP = 7.40 x $\left[\frac{RPM}{1000}\right]^3$

Tip Speed = 8.25 x RPM
Max. Motor Frame Size = 254T
Unit Weight (less motor) = 220 lbs.

Roof Opening = 35-1/2'' Sq.
Curb O. D. = 38-1/2" Sq.

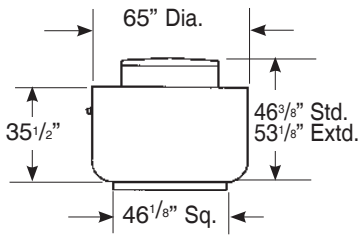
PERFORMANCE DATA

RPM Range - Motor HP	RPM	STATIC PRESSURE, INCHES W. G.											
		.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500	2.750
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
P1 (1/2)	275	4591 .14 4.7											
P2 (1/2)	300	5009 .18 5.5	1657 .14 3.4										
	325	5426 .23 6.4	2935 .24 4.0										
R1 (3/4)	350	5843 .28 7.3	3723 .31 4.8										
	375	6261 .35 8.3	4390 .39 5.8										
S1 (1)	400	6678 .43 9.3	4972 .47 6.9										
	425	7095 .51 10.2	5537 .57 7.9	2391 .41 6.6									
	450	7513 .61 11.2	6085 .68 9.0	3817 .63 7.3									
T1 (1-1/2)	475	7930 .71 12.2	6590 .79 10.1	4675 .76 7.9									
	500	8347 .83 13.3	7086 .92 11.2	5403 .90 8.9									
V1 (2)	525	8765 .96 14.4	7576 1.06 12.4	6078 1.06 10.1	3218 .82 9.4								
	550	9182 1.11 15.5	8059 1.21 13.6	6669 1.22 11.5	4635 1.14 10.3								
	575	9600 1.26 16.7	8538 1.38 14.8	7244 1.40 12.9	5497 1.32 11.3								
W1 (3)	600	10017 1.43 17.9	9012 1.56 16.1	7807 1.60 14.3	6276 1.55 12.6	3313 1.15 12.4							
	625	10434 1.62 19.1	9476 1.75 17.4	8361 1.79 15.8	6961 1.77 14.0	4816 1.51 13.5							
	650	10852 1.82 20.0	9930 1.96 18.7	8882 2.03 17.3	7615 2.01 15 .6	5871 1.93 14.6							
X1 (5)	675	11269 2.04 22.0	10382 2.19 20.0	9385 2.27 18.7	8200 2.26 17.1	6720 2.18 15.7	3975 1.70 15.7						
	700	11687 2.28 23.0	10831 2.43 21.0	9881 2.52 20.0	8776 2.53 18.6	7445 2.47 17.2	5453 2.13 16.9						
	725	12104 2.53 25.0	11277 2.68 23.0	10373 2.79 22.0	9341 2.82 20.0	8128 2.77 18.6	6504 2.68 18.0	3055 1.74 18.0					
	750	12521 2.80 26.0	11722 2.96 24.0	10860 3.07 23.0	9899 3.09 22.0	8780 3.09 20.0	7356 2.97 19.1	5033 2.50 19.1					
Y1 (7-1/2)	775	12939 3.09 27.0	12165 3.26 26.0	11344 3.38 24.0	10449 3.42 23.0	9366 3.42 22.0	8113 3.35 20.0	6425 2.99 20.0					
	800	13356 3.40 29.0	12606 3.57 27.0	11823 3.71 26.0	10957 3.79 25.0	9944 3.77 23.0	8800 3.71 22.0	7325 3.62 21.0	4789 2.86 21.0				
	825	13773 3.73 30.0	13046 3.90 28.0	12299 4.06 27.0	11460 4.14 26.0	10513 4.15 25.0	9475 4.11 23.0	8173 3.97 22.0	6271 3.43 22.0				
	850	14191 4.08 32.0	13485 4.26 30.0	12772 4.43 28.0	11957 4.51 27.0	11074 4.55 26.0	10087 4.51 25.0	8916 4.41 24.0	7425 4.27 23.0	4781 3.31 23.0			
	875	14608 4.45 33.0	13922 4.63 31.0	13240 4.82 30.0	12451 4.91 29.0	11629 4.91 27.0	10670 4.93 26.0	9603 4.86 25.0	8284 4.78 25.0	6316 3.97 25.0			
	900	15026 4.84 34.0	14359 5.03 33.0	13695 5.22 31.0	12940 5.32 30.0	12717 5.41 29.0	11245 5.38 28.0	10279 5.33 27.0	9125 5.21 26.0	7635 5.01 26.0	4970 3.88 26.0		
	925	15443 5.26 36.0	14794 5.45 34.0	14148 5.65 33.0	13426 5.76 31.0	12677 5.85 30.0	11813 5.85 29.0	10905 5.81 28.0	9821 5.70 27.0	8500 5.60 27.0	6527 4.80 27.0		
	950	15860 5.70 38.0	15228 5.90 36.0	14599 6.10 34.0	13909 6.23 33.0	13180 6.32 32.0	12374 6.35 31.0	11490 6.30 30.0	10506 6.22 29.0	9349 6.05 28.0	7914 5.53 28.0	5324 4.61 28.0	
	975	16278 6.16 39.0	15662 6.36 38.0	15049 6.57 36.0	14389 6.72 35.0	13678 6.81 33.0	12929 6.80 32.0	12068 6.83 31.0	11180 6.78 30.0	10115 6.65 29.0	8806 6.52 29.0	6878 5.63 29.0	
	1000	16695 6.64 41.0	16094 6.85 39.0	15497 7.06 38.0	14865 7.23 36.0	14173 7.33 35.0	13479 7.34 34.0	12639 7.38 33.0	11800 7.34 32.0	10806 7.23 31.0	9659 7.00 30.0	8265 6.42 30.0	5819 5.49 30.0

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

VRBK 36
BELT DRIVE



DESIGN DA TA

Max BHP = 19.71 x $\left[\frac{RPM}{1000}\right]^3$

Tip Speed = 9.62 x RPM
Max. Motor Frame Size = 254T
Unit Weight (less motor) = 350 lbs.
Roof Opening = 41-1/2'' Sq.
Curb O. D. = 44-1/2" Sq.

PERFORMANCE DATA

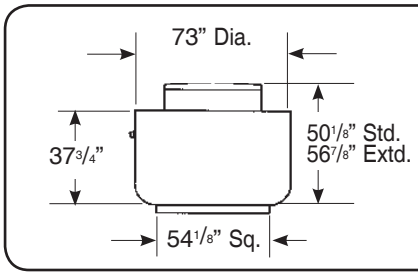
RPM Range - Motor HP	RPM	STATIC PRESSURE, INCHES W. G.											
		.000	.250	.375	.500	.625	.750	1.000	1.250	1.500	1.750	2.000	2.250
		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
R1 (3/4)	250	6697 .30 9.2	2317 .22 3.7										
	270	7233 .37 10.3	4086 .35 4.8										
S1 (1)	290	7769 .46 11.4	5275 .47 6.2										
	310	8304 .57 12.5	6161 .58 7.5	3363 .46 5.7									
T1 (1-1/2)	330	8840 .68 13.7	6979 .71 8.9	4960 .64 6.9									
	350	9376 .82 14.9	7690 .85 10.4	6213 .82 8.3	2711 .53 7.0								
	370	9912 .96 16.1	8370 1.00 11.7	7140 .99 9.7	4963 .84 8.2								
V1 (2)	390	10447 1.13 17.4	9039 1.17 13.2	7972 1.17 11.3	6296 1.08 9.5	2764 .69 8.4							
	410	10983 1.31 18.7	9697 1.36 14.6	8772 1.36 13.0	7454 1.32 11.0	5254 1.12 9.6							
W1 (3)	430	11519 1.51 20.0	10346 1.56 16.1	9464 .157 14.8	8361 1.55 12.7	6657 1.43 11.2	3593 1.04 10.1						
	450	12055 1.74 21.0	10988 1.79 17.7	10145 1.80 16.5	9191 1.79 14.6	7907 1.73 12.9	5826 1.48 11.6						
	470	12591 1.98 23.0	11596 2.04 19.2	10816 2.05 18.1	10003 2.05 16.5	8871 2.01 14.7	7226 1.86 13.4						
	490	13126 2.24 24.0	12173 2.30 21.0	11478 2.32 19.6	10704 2.32 18.5	9734 2.30 16.6	8480 2.21 15.2	2817 1.18 13.2					
X1 (5)	510	13662 2.53 25.0	12746 2.59 22.0	12132 2.61 21.0	11389 2.62 20.0	10558 2.61 18.5	9494 2.56 17.0	5949 2.07 14.6					
	530	14198 2.84 27.0	13316 2.90 24.0	12780 2.93 23.0	12064 2.93 22.0	11349 2.94 21.0	10381 2.91 18.9	7528 2.59 16.5					
	550	14734 3.17 28.0	13884 3.24 25.0	13421 3.27 24.0	12732 3.28 24.0	12042 3.29 23.0	11211 3.27 21.0	8806 3.03 18.3	3594 1.83 16.8				
	570	15269 3.53 30.0	14450 3.60 27.0	14040 3.63 26.0	13392 3.65 25.0	12726 3.65 24.0	12025 3.66 23.0	10051 3.51 20.0	6635 2.89 18.3				
Y1 (7-1/2)	590	15805 3.91 31.0	15013 3.99 28.0	14617 4.02 27.0	14045 4.04 27.0	13402 4.05 26.0	12760 4.06 25.0	11014 3.97 22.0	8243 3.50 19.9				
	610	16341 4.32 33.0	15575 4.40 30.0	15192 4.44 29.0	14693 4.46 28.0	14071 4.47 27.0	13449 4.48 27.0	11904 4.43 24.0	9535 4.10 22.0	5347 3.18 20.0			
	630	16877 4.76 34.0	16135 4.84 32.0	15764 4.88 31.0	15335 4.91 29.0	14733 4.92 29.0	14131 4.93 28.0	12735 4.91 26.0	10788 4.69 24.0	7723 3.94 22.0			
	650	17412 5.23 36.0	16694 5.31 34.0	16334 5.35 32.0	15972 5.39 31.0	15389 5.40 30.0	14805 5.41 30.0	13554 5.41 28.0	11866 5.27 26.0	9277 4.78 24.0	4095 2.94 22.0		
	670	17948 5.73 38.0	17251 5.81 35.0	16902 5.85 34.0	16553 5.90 33.0	16039 5.91 32.0	15473 5.93 31.0	14341 5.95 29.0	12790 5.85 27.0	10557 5.45 26.0	7309 4.65 23.0		
	680	18216 5.99 39.0	17529 6.07 36.0	17185 6.12 35.0	16842 6.16 34.0	16363 6.18 33.0	15805 6.19 32.0	14689 6.21 30.0	13225 6.14 28.0	11187 5.79 27.0	8303 4.94 24.0		
	690	18484 6.26 39.0	17807 6.34 37.0	17468 6.39 36.0	17129 6.43 35.0	16685 6.46 34.0	16135 6.47 33.0	15036 6.49 31.0	13643 6.43 29.0	11810 6.15 28.0	9108 5.41 26.0		
	700	18752 6.53 40.0	18084 6.62 38.0	17750 6.66 37.0	17417 6.71 36.0	17005 6.74 35.0	16464 6.75 34.0	15380 6.77 32.0	14059 6.72 30.0	12426 6.53 28.0	9885 5.95 27.0	5422 4.26 25.0	
	710	19020 6.82 41.0	18359 6.91 39.0	18032 6.95 38.0	17703 6.99 37.0	17325 7.03 36.0	16791 7.04 35.0	15723 7.06 33.0	14471 7.03 31.0	12904 6.86 29.0	10531 6.33 28.0	6954 5.27 26.0	
	720	19288 7.11 42.0	18636 7.20 40.0	18314 7.24 39.0	17990 7.29 38.0	17644 7.33 37.0	17117 7.34 36.0	16064 7.37 34.0	14880 7.35 32.0	13369 7.20 30.0	11170 6.72 29.0	8311 5.81 27.0	
	730	19555 7.41 43.0	18913 7.50 41.0	18595 7.55 40.0	18275 7.59 39.0	17955 7.64 38.0	17442 7.65 37.0	16403 7.67 35.0	15287 7.67 33.0	13830 7.55 32.0	11082 7.12 30.0	9123 6.20 28.0	
	740	19823 7.72 44.0	19189 7.81 42.0	18876 7.86 41.0	18560 7.90 40.0	18245 7.95 39.0	17766 7.97 38.0	16741 7.99 36.0	15691 8.01 34.0	14281 7.90 33.0	12428 7.53 31.0	9926 6.74 29.0	5250 4.74 28.0
	750	20091 8.03 45.0	19466 8.13 43.0	19157 8.18 42.0	18845 8.22 41.0	18534 8.27 40.0	18089 8.29 39.0	17077 8.32 37.0	16066 8.34 36.0	14701 8.24 34.0	13047 7.96 32.0	10676 7.34 30.0	6592 6.06 29.0

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

VRBK 42
BELT DRIVE

PERFORMANCE DATA



DESIGN DATA

Max BHP = 39.60 x $\left[\frac{RPM}{1000}\right]^3$

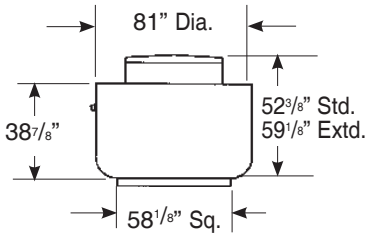
Tip Speed = 11.26 x RPM
Max. Motor Frame Size = 254T
Unit Weight (less motor) = 530 lbs.
Roof Opening = 49-1/2" Sq.
Curb O. D. = 52-1/2" Sq.

RPM Range - Motor HP	RPM	STATIC PRESSURE, INCHES W. G.											
		.000	.125	.250	.375	.500	.625	.750	1.000	1.250	1.500	1.750	2.000
S1 (1)		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
	215	8225 .36 6.5	6840 .39 5.1										
	230	8799 .44 7.4	7505 .47 6.1	4752 .41 4.4									
	245	9372 .53 8.3	8159 .57 7.1	7610 .55 5.3									
T1 (1-1/2)	260	9946 .64 9.1	8804 .67 8.0	7188 .68 6.4									
	275	10520 .76 9.9	9441 .79 8.8	8111 .81 7.4	5046 .68 6.1								
	290	11094 .89 10.8	10071 .93 9.7	9008 .96 8.5	6655 .87 7.0								
	305	11668 1.03 11.6	10695 1.07 10.6	9715 1.11 9.5	7855 1.08 8.1								
V1 (2)	320	12242 1.19 12.5	11314 1.23 11.5	10382 1.28 10.6	8902 1.26 9.2	6182 1.10 8.1							
	335	12815 1.37 13.5	11929 1.41 12.4	11040 1.46 11.5	9824 1.47 10.3	7698 1.34 9.1							
	350	13389 1.56 14.6	12541 1.61 13.5	11691 1.65 12.6	10725 1.69 11.5	8904 1.62 10.2							
W1 (3)	365	13963 1.77 15.7	13150 1.82 14.7	12335 1.87 13.7	11515 1.92 12.7	9997 1.87 11.4	7650 1.66 10.5						
	380	14537 1.99 17.0	13755 2.05 15.9	12974 2.10 15.0	12187 2.15 14.1	10927 2.13 12.7	9085 2.03 11.8						
	395	15111 2.24 18.2	14359 2.29 17.2	13609 2.35 16.3	12851 2.40 15.4	11838 2.41 14.1	10235 2.34 13.2	7887 2.06 12.4					
X1 (5)	410	15685 2.50 19.5	14960 2.56 18.5	14237 2.62 17.7	13508 2.67 16.8	12732 2.72 15.6	11297 2.65 14.6	9400 2.46 13.8					
	425	16258 2.79 21.0	15559 2.85 19.8	14862 2.91 19.0	14160 2.96 18.3	13456 3.02 17.2	12226 2.98 16.1	10626 2.89 15.3					
	440	16832 3.09 22.0	16157 3.15 21.0	15483 3.22 20.0	14806 3.28 19.6	14126 3.34 18.9	13138 3.33 17.6	11761 3.25 16.8					
	455	17406 3.42 23.0	16753 3.48 23.0	16102 3.55 22.0	15448 3.61 21.0	14790 3.67 20.0	14034 3.71 19.2	12741 3.63 18.4	8994 3.18 17.0				
Y1 (7-1/2)	470	17980 3.77 25.0	17347 3.84 24.0	16717 3.90 23.0	16085 3.97 23.0	15448 4.03 22.0	14812 4.10 21.0	13664 4.04 19.9	10512 3.66 18.5				
	485	18554 4.14 26.0	17940 4.21 26.0	17330 4.28 25.0	16719 4.35 24.0	16102 4.41 23.0	15484 4.48 23.0	14572 4.47 21.0	11828 4.25 20.0				
	500	19128 4.54 28.0	18532 4.61 27.0	17940 4.68 26.0	17347 4.75 25.0	16750 4.82 25.0	16151 4.89 24.0	15466 4.93 23.0	12973 4.76 22.0				
	515	19701 4.96 29.0	19123 5.03 28.0	18548 5.10 27.0	17973 5.17 27.0	17394 5.25 26.0	16813 5.32 25.0	16232 5.39 24.0	14064 5.24 23.0	10698 4.64 22.0			
	530	20275 5.41 30.0	19714 5.48 29.0	19155 5.55 28.0	18596 5.63 28.0	18034 5.70 27.0	17469 5.77 27.0	16905 5.85 26.0	14998 5.76 24.0	12204 5.32 23.0			
	545	20849 5.88 31.0	20303 5.95 30.0	19759 6.03 30.0	19215 6.11 29.0	18671 6.18 28.0	18121 6.26 28.0	17572 6.33 27.0	15918 6.30 25.0	13435 6.05 24.0			
C1 (10)	560	21423 6.38 32.0	20891 6.46 32.0	20362 6.53 31.0	19833 6.61 30.0	19304 6.69 30.0	18769 6.77 29.0	18235 6.84 29.0	16825 6.88 27.0	14579 6.69 26.0	11296 5.89 24.0		
	575	21997 6.90 33.0	21479 6.98 33.0	20963 7.06 32.0	20448 7.14 32.0	19933 7.22 31.0	19413 7.30 30.0	18893 7.38 30.0	17720 7.49 28.0	15674 7.29 27.0	12812 6.69 26.0		
	590	22570 7.46 35.0	22065 7.54 34.0	21563 7.62 33.0	21061 7.70 33.0	20559 7.79 32.0	20054 7.87 32.0	19547 7.95 31.0	18532 8.11 30.0	16610 7.93 28.0	14176 7.61 27.0		
	605	23144 8.04 36.0	22652 8.13 35.0	22162 8.21 35.0	21672 8.29 34.0	21183 8.38 34.0	20691 8.46 33.0	20196 8.54 33.0	19207 8.71 32.0	17533 8.61 30.0	15329 8.36 29.0	12214 7.42 28.0	
	620	23718 8.65 37.0	23237 8.74 37.0	22759 8.83 36.0	22281 8.91 36.0	21804 9.00 35.0	21325 9.09 35.0	20842 9.17 35.0	19877 9.34 34.0	18443 9.32 32.0	16463 9.13 30.0	13731 8.36 29.0	
	635	24292 9.30 39.0	23822 9.39 38.0	23356 9.47 38.0	22889 9.56 37.0	22423 9.65 37.0	21956 9.74 37.0	21485 9.83 36.0	20543 10.00 36.0	19343 10.06 34.0	17491 9.85 32.0	15136 9.46 31.0	11640 8.33 30.0
	650	24866 9.97 41.0	24407 10.06 40.0	23951 10.15 40.0	23495 10.24 39.0	23039 10.33 39.0	22584 10.42 38.0	22125 10.51 38.0	21204 10.69 37.0	20233 10.85 36.0	18423 10.26 34.0	16292 10.33 33.0	13387 9.30 31.0

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

VRBK 48
BELT DRIVE



DESIGN DATA

Max BHP = 66.04 x $\left[\frac{RPM}{1000}\right]^3$

Tip Speed = 12.83 x RPM
Max. Motor Frame Size = 254T
Unit Weight (less motor) = 585 lbs.

Roof Opening = 53-1/2" Sq.
Curb O. D. = 56-1/2" Sq.

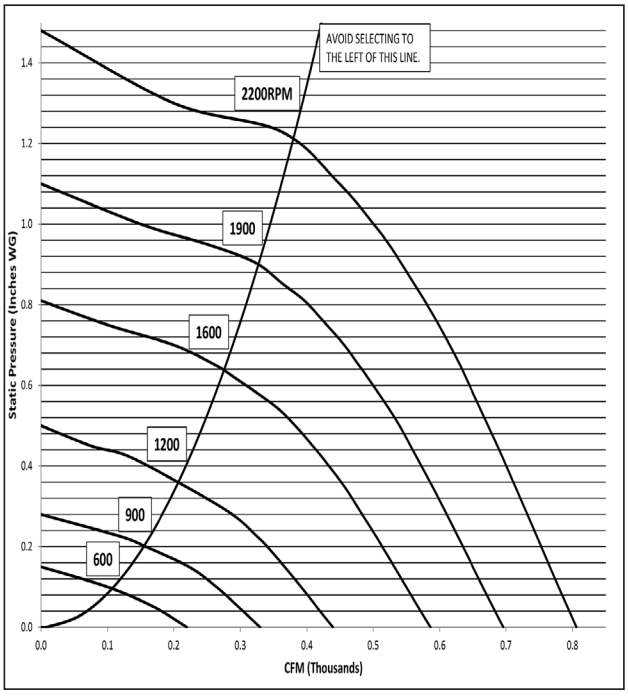
PERFORMANCE DATA

RPM Range - Motor HP	RPM	STATIC PRESSURE, INCHES W. G.											
		.000	.125	.250	.375	.500	.625	.750	1.000	1.250	1.500	1.750	2.000
T1 (1-1/2)		CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES	CFM BHP SONES
	200	11712 .46 7.4	9785 .52 5.9										
	220	12383 .61 8.7	11136 .68 7.2	8433 .74 6.5									
V1 (2)	240	14054 .80 10.0	12457 .87 8.7	10432 .91 7.9									
	260	15226 1.01 11.5	13755 1.10 10.3	12111 1.16 9.6	9063 1.23 9.3								
	280	16397 1.26 13.5	15036 1.36 12.2	13643 1.44 11.4	11568 1.45 11.0								
	290	16982 1.40 14.5	15670 1.50 13.2	14326 1.59 12.4	12438 1.61 11.9								
W1 (3)	300	17568 1.55 15.5	16300 1.65 14.2	15002 1.75 13.4	13292 1.78 12.9	10428 1.88 12.8							
	310	18154 1.71 16.6	16927 1.82 15.3	15673 1.91 14.4	14133 1.97 13.9	11783 2.09 13.7							
	320	18739 1.89 17.6	17551 1.99 16.4	16338 2.09 15.5	14692 2.17 15.0	13042 2.17 14.7							
	330	19325 2.07 18.7	18172 2.18 17.5	16999 2.28 16.6	15780 2.37 16.1	13941 2.38 15.7	10731 2.33 15.7						
	340	19910 2.26 19.7	18792 2.38 18.6	17655 2.48 17.7	16508 2.58 17.3	14803 2.60 16.9	12330 2.85 16.8						
X1 (5)	350	20496 2.47 21.0	19409 2.58 19.7	18307 2.70 18.8	17193 2.80 18.4	15652 2.83 18.0	13607 2.95 17.8						
	360	21082 2.69 22.0	20025 2.81 21.0	18956 2.92 19.9	17873 3.03 19.5	16490 3.08 19.1	14805 3.08 18.9	11497 2.94 18.9					
	370	21667 2.92 23.0	20639 3.04 22.0	19601 3.16 21.0	18547 3.27 21.0	17317 3.35 20.0	15678 3.35 20.0	13190 3.71 20.0					
Y1 (7-1/2)	380	22253 3.16 24.0	21251 3.29 23.0	20243 3.41 22.0	19217 3.52 22.0	18135 3.63 21.0	16539 3.63 21.0	14474 3.84 21.0					
	390	22838 3.41 26.0	21863 3.54 24.0	20883 3.67 24.0	19883 3.79 23.0	18883 3.91 23.0	17389 3.92 22.0	15734 3.97 22.0					
	400	23424 3.68 27.0	22472 3.82 26.0	21519 3.95 25.0	20545 4.07 24.0	19570 4.19 24.0	18229 4.23 24.0	16712 4.23 24.0					
	410	24010 3.97 28.0	23081 4.10 27.0	22154 4.24 26.0	21203 4.36 25.0	20252 4.49 25.0	19059 4.55 25.0	17579 4.56 25.0					
	420	24595 4.26 29.0	23689 4.41 28.0	22784 4.55 27.0	21857 4.67 27.0	20929 4.80 26.0	19880 4.89 26.0	18436 4.90 26.0	14018 4.97 26.0				
	430	25181 4.58 30.0	24295 4.72 29.0	23412 4.86 28.0	22509 5.00 28.0	21602 5.12 27.0	20694 5.25 27.0	19283 5.25 27.0	15587 5.76 27.0				
	440	25766 4.90 32.0	24901 5.05 31.0	24038 5.20 30.0	23157 5.33 29.0	22271 5.47 28.0	21385 5.60 28.0	20120 5.63 28.0	16867 5.93 28.0				
	450	26352 5.25 33.0	25506 5.40 32.0	24662 5.55 31.0	23803 5.69 30.0	22937 5.82 29.0	22070 5.96 29.0	20950 6.02 29.0	18126 6.10 29.0				
	460	26938 5.60 34.0	26110 5.76 33.0	25284 5.91 32.0	24446 6.06 32.0	23599 6.19 31.0	22751 6.33 30.0	21771 6.43 30.0	19133 6.43 30.0				
C1 (10)	470	27523 5.98 35.0	26713 6.13 35.0	25905 6.29 34.0	25087 6.44 33.0	24258 6.58 32.0	23428 6.72 32.0	22584 6.86 31.0	20003 6.86 31.0	15746 7.00 31.0			
	480	28109 6.37 37.0	27315 6.53 36.0	26524 6.69 35.0	25726 6.84 34.0	24914 6.99 33.0	24101 7.13 33.0	23289 7.27 33.0	20863 7.31 32.0	17330 8.04 32.0			
	490	28694 6.77 38.0	27917 6.94 37.0	27142 7.10 36.0	26362 7.26 36.0	25567 7.41 35.0	24771 7.55 34.0	23975 7.70 34.0	21715 7.78 33.0	18612 8.25 33.0			
	500	29280 7.20 39.0	28518 7.36 39.0	27758 7.53 38.0	26997 7.70 37.0	26217 7.85 36.0	25437 8.00 36.0	24657 8.15 35.0	22558 8.26 35.0	19876 8.46 34.0			
	510	29866 7.64 41.0	29118 7.81 40.0	28374 7.98 39.0	27629 8.15 39.0	26865 8.30 38.0	26100 8.45 37.0	25336 8.61 37.0	23394 8.77 36.0	21015 8.77 36.0	16412 8.47 36.0		
	520	30451 8.09 42.0	29718 8.27 42.0	28988 8.44 41.0	28257 8.62 40.0	27510 8.77 39.0	26761 8.93 39.0	26011 9.09 38.0	24222 9.29 38.0	21889 9.29 37.0	18127 9.83 37.0	9825 6.03 37.0	
	530	30137 8.57 44.0	30317 8.75 43.0	29601 8.92 42.0	28884 9.10 42.0	28154 9.27 41.0	27418 9.42 40.0	26682 9.58 40.0	25044 9.84 39.0	22754 9.84 39.0	19523 10.67 38.0	10966 6.65 38.0	

Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A, free inlet hemispherical sone levels.

VRBK 06
AIR PERFORMANCE



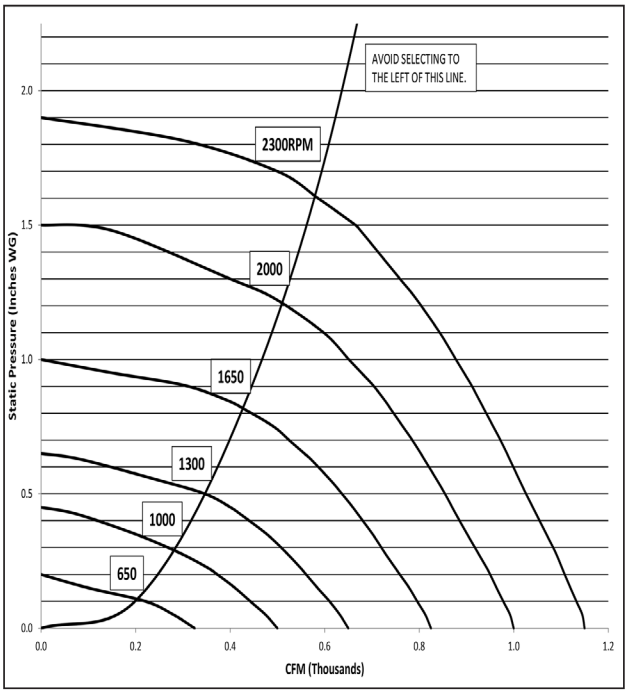
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VRBK 06
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10^{-12} WATTS OCTAVE BANDS 1	2	3	4	5	6	7	8	LWA
600	0.000	60	65	64	56	51	50	43	33	60
1000	0.000	59	64	62	53	49	48	40	30	57
	0.125	60	61	59	53	50	48	41	33	56
1400	0.000	63	69	71	65	58	56	52	42	66
	0.500	66	70	69	66	60	57	52	46	67
1800	0.000	66	73	77	74	64	61	61	51	74
	0.375	66	74	74	71	64	62	60	52	72
	0.750	69	75	75	73	66	63	60	54	74
2100	0.000	68	75	79	78	70	65	64	57	78
	0.500	68	76	77	75	69	66	64	57	76
	1.000	70	77	78	77	71	67	64	58	77

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} and $L_{wi}A$ sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VRBK 08
AIR PERFORMANCE



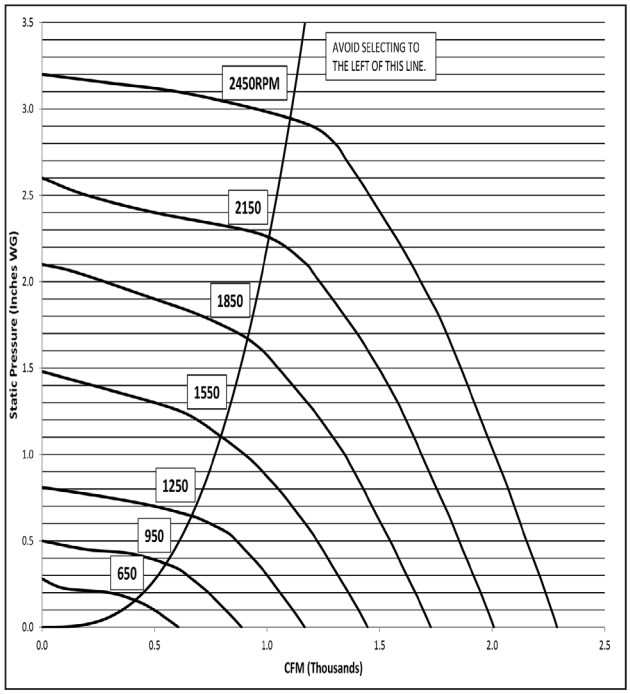
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VRBK 08
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10^{-12} WATTS OCTAVE BANDS 1	2	3	4	5	6	7	8	LWA
650	0.000	65	69	67	59	55	54	53	51	64
1050	0.000	63	67	65	56	53	52	50	48	61
	0.250	65	65	62	55	53	52	47	41	60
1450	0.000	68	72	74	68	61	60	58	56	70
	0.500	69	73	71	66	60	60	57	51	69
1800	0.000	72	76	80	75	66	65	64	62	76
	0.500	72	77	77	74	65	65	63	59	75
	1.000	72	78	77	74	66	66	64	59	75
2100	0.000	74	78	82	80	71	68	67	65	80
	0.500	74	79	81	79	70	68	67	64	79
	1.000	74	80	80	78	70	68	67	62	78
2300	0.000	76	80	84	82	74	70	69	68	82
	0.750	75	81	82	81	73	70	69	66	81
	1.500	75	81	82	80	74	71	70	66	81

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} and $L_{wi}A$ sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VRBK 10
AIR PERFORMANCE



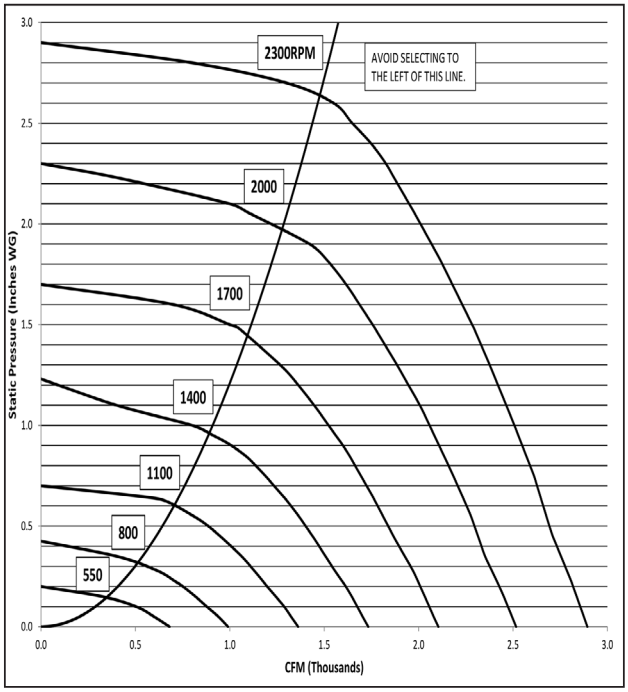
Performance certified is for installation type A - free inlet, free outlet. Performance ratings (bhp) do not include transmission losses. Performance ratings do not include the effects of accessories.

VRBK 10
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10^{-12} WATTS OCTAVE BANDS 1	2	3	4	5	6	7	8	LWA
650	0.000	69	73	71	62	58	61	58	52	68
950	0.000	67	70	66	55	54	58	52	46	64
	0.375	66	69	62	53	54	56	51	46	61
1300	0.000	71	75	75	67	61	63	62	56	71
	0.375	71	75	73	64	60	62	60	54	69
	0.750	70	74	72	64	60	62	60	56	69
1650	0.000	74	79	81	76	66	67	69	63	78
	0.625	73	79	80	73	65	66	67	61	76
	1.250	72	79	79	72	65	67	67	63	76
2000	0.000	76	82	86	83	71	70	75	69	83
	0.500	77	83	86	81	70	70	73	68	82
	1.000	76	82	85	79	69	69	72	67	81
	2.000	75	82	85	79	70	71	72	69	81
2350	0.000	79	85	88	87	78	74	77	74	87
	0.500	79	85	88	86	77	73	76	73	86
	1.000	79	85	88	85	76	73	75	72	86
	2.000	76	83	88	84	75	72	75	72	85
	2.500	76	83	88	84	75	74	75	72	85

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} and $L_{wi}A$ sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VRBK 12
AIR PERFORMANCE



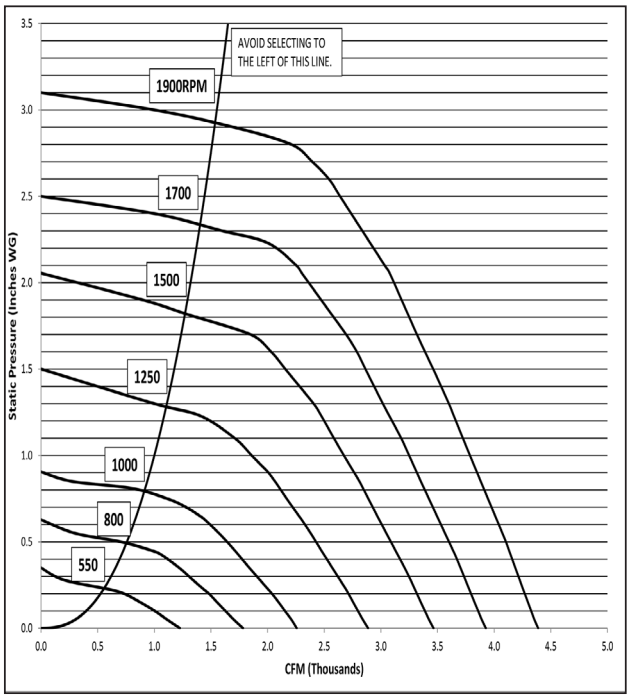
Performance certified is for installation type A - free inlet, free outlet. Performance ratings (bhp) do not include transmission losses. Performance ratings do not include the effects of accessories.

VRBK 12
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10^{-12} WATTS OCTAVE BANDS 1	2	3	4	5	6	7	8	LWA
550	0.000	62	55	47	45	43	40	35	30	49
950	0.000	70	75	65	58	56	55	50	45	64
	0.375	71	72	62	55	55	54	49	43	62
1250	0.000	73	79	75	66	62	62	58	53	71
	0.250	73	79	74	65	62	61	57	51	70
	0.500	72	77	73	64	61	60	56	50	69
1600	0.000	75	83	85	74	68	67	66	61	79
	0.750	73	82	82	72	66	66	64	58	77
	1.250	76	83	82	71	65	66	65	60	77
1950	0.000	77	86	90	81	73	72	71	66	84
	0.750	75	86	89	79	72	72	70	64	83
	1.250	75	85	88	78	71	71	69	64	82
	1.750	77	86	88	78	70	71	70	65	82
2250	0.000	78	87	93	86	78	75	74	70	88
	1.000	76	87	92	85	76	75	73	69	87
	1.500	76	86	91	84	76	74	73	68	86
	2.000	77	87	91	84	75	74	73	69	86
	2.500	79	88	91	84	75	73	73	70	86

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} and $L_{wi}A$ sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VRBK 15
AIR PERFORMANCE



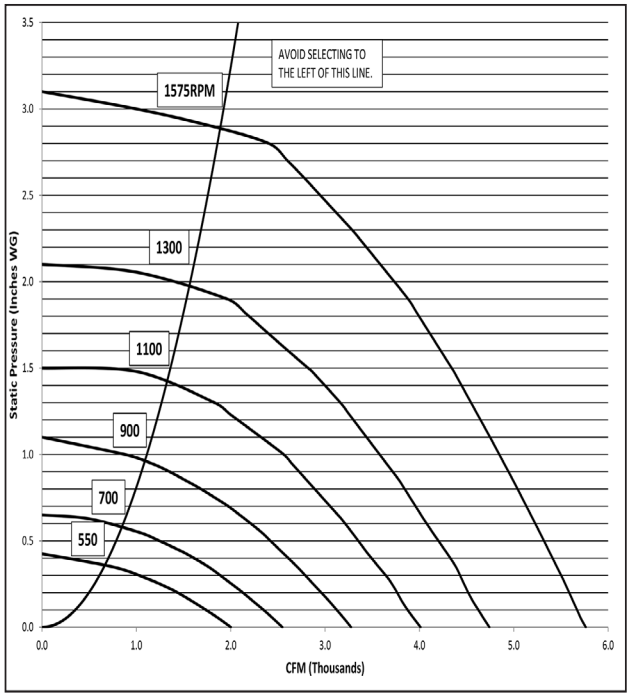
Performance certified is for installation type A - free inlet, free outlet. Performance ratings (bhp) do not include transmission losses. Performance ratings do not include the effects of accessories.

VRBK 15
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10^{-12} WATTS OCTAVE BANDS 1	2	3	4	5	6	7	8	LWA
550	0.000	64	64	56	53	52	47	37	27	57
800	0.000	70	75	68	61	61	60	51	41	67
	0.375	68	72	65	58	57	55	49	43	63
1050	0.000	73	79	77	70	67	66	61	51	74
	0.375	73	78	77	68	64	63	57	51	72
	0.750	73	77	75	66	63	62	58	52	71
1300	0.000	77	82	85	76	71	72	68	58	80
	0.750	76	81	84	74	68	68	64	58	78
	1.250	78	81	82	74	67	68	64	58	77
1550	0.000	79	84	89	82	75	76	74	65	85
	0.750	78	83	89	81	73	73	69	63	84
	1.250	78	83	87	80	72	72	69	63	82
	1.750	80	84	87	80	72	72	69	64	82
1750	0.000	81	86	91	86	79	78	77	69	88
	1.000	80	85	91	85	77	75	72	67	86
	1.500	80	85	89	84	76	75	72	67	85
	2.000	79	84	88	83	75	74	72	67	85
	2.500	86	88	90	84	76	75	73	67	86

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} and $L_{wi}A$ sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VRBK 18
AIR PERFORMANCE



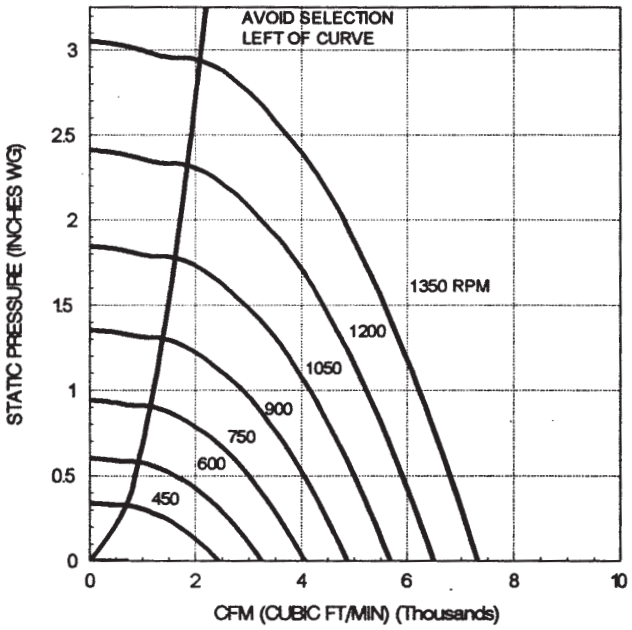
Performance certified is for installation type A - free inlet, free outlet. Performance ratings (bhp) do not include transmission losses. Performance ratings do not include the effects of accessories.

VRBK 18
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10^{-12} WATTS OCTAVE BANDS 1	2	3	4	5	6	7	8	LWA
550	0.000	68	68	59	56	55	55	44	33	61
750	0.000	74	76	69	64	62	63	55	44	69
	0.500	71	70	65	60	57	54	48	41	63
950	0.000	78	80	78	70	67	67	64	53	75
	0.375	77	78	75	68	64	64	59	48	72
	0.625	78	75	73	67	63	61	56	49	70
1150	0.000	82	84	85	75	71	71	72	61	80
	1.000	84	79	79	72	68	66	62	55	75
	1.500	84	79	79	73	68	66	62	55	75
1350	0.000	85	87	89	80	76	74	76	67	85
	1.000	88	83	83	77	72	70	67	60	80
	1.500	89	83	83	77	72	70	66	60	80
	2.000	89	83	83	77	72	70	66	60	80
1500	0.000	87	89	91	84	78	77	78	71	87
	1.000	91	86	85	80	75	72	69	63	82
	1.500	91	86	85	80	75	72	69	63	82
	2.000	92	86	85	81	75	72	69	63	83
	2.500	92	87	85	81	75	73	69	63	83

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} and $L_{wi}A$ sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VRBK 21
AIR PERFORMANCE



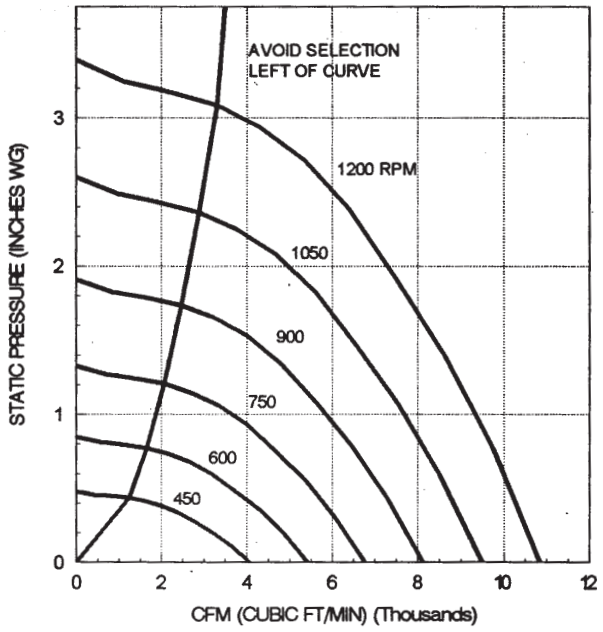
Performance certified is for installation type A - free inlet, free outlet. Performance ratings (bhp) do not include transmission losses. Performance ratings do not include the effects of accessories.

VRBK 21
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10^{-12} WATTS OCTAVE BANDS 1	2	3	4	5	6	7	8	LWA
400	.000	59	59	57	57	55	50	43	37	59
600	.000	68	72	66	66	67	62	56	49	70
	.500	70	71	61	60	62	60	53	46	66
775	.000	77	77	75	72	72	69	64	57	76
	.375	77	77	73	69	68	66	61	55	74
	.750	78	77	72	66	67	66	61	54	73
950	.000	84	82	82	77	76	75	70	64	82
	.500	84	82	80	74	73	72	67	61	79
	1.250	85	83	80	71	71	72	67	60	78
1125	.000	90	85	87	81	79	80	75	69	86
	1.000	89	87	86	77	75	77	72	66	83
	1.500	90	87	86	76	74	76	73	66	83
	2.000	90	87	86	76	74	76	73	68	83
1300	.000	93	90	91	85	83	83	79	73	90
	1.000	91	91	90	83	80	80	76	71	88
	1.500	92	91	90	82	78	79	76	70	87
	2.000	93	92	90	81	77	79	77	70	87
	2.750	93	92	90	80	77	79	77	70	87

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} and $L_{wi}A$ sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VRBK 24
AIR PERFORMANCE



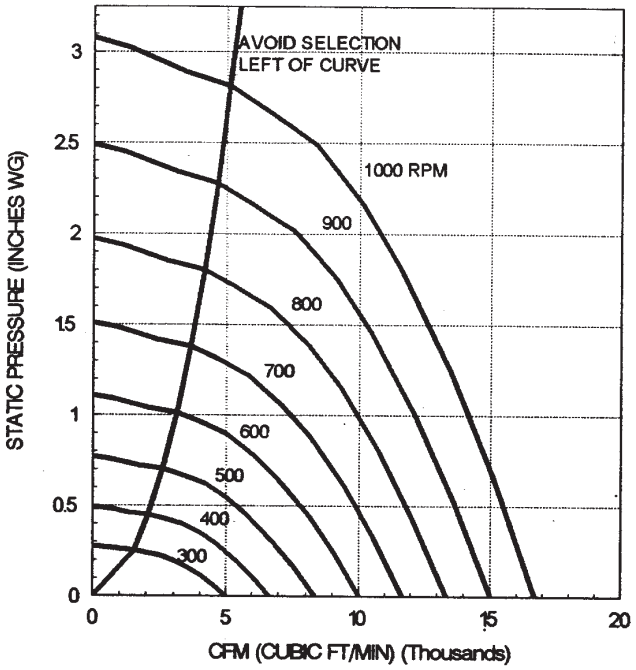
Performance certified is for installation type A - free inlet, free outlet. Performance ratings (bhp) do not include transmission losses. Performance ratings do not include the effects of accessories.

VRBK 24
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10^{-12} WATTS OCTAVE BANDS 1	2	3	4	5	6	7	8	LWA
400	.000	69	68	61	59	60	59	50	40	65
550	.000	76	78	72	67	66	67	61	51	73
	.375	75	75	68	64	64	62	57	50	69
	.625	74	75	67	62	63	62	56	50	68
700	.000	82	84	80	73	71	72	70	60	79
	.500	81	82	78	71	69	69	64	58	76
	.750	82	81	77	69	68	69	64	57	75
	1.000	82	81	77	68	68	68	64	57	75
850	.000	87	89	87	78	75	76	76	67	84
	.500	86	88	85	77	73	75	72	65	82
	.750	86	87	85	76	72	75	70	64	82
	1.000	87	87	84	75	72	74	70	63	81
	1.500	87	86	84	73	71	73	70	63	81
1000	.000	90	93	92	84	79	80	81	73	89
	.500	90	92	91	83	78	79	78	71	87
	1.000	90	91	89	81	76	78	75	69	86
	1.500	90	91	89	80	76	77	75	68	85
	2.000	91	90	89	79	75	77	74	68	85

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} and $L_{wi}A$ sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VRBK 30
AIR PERFORMANCE



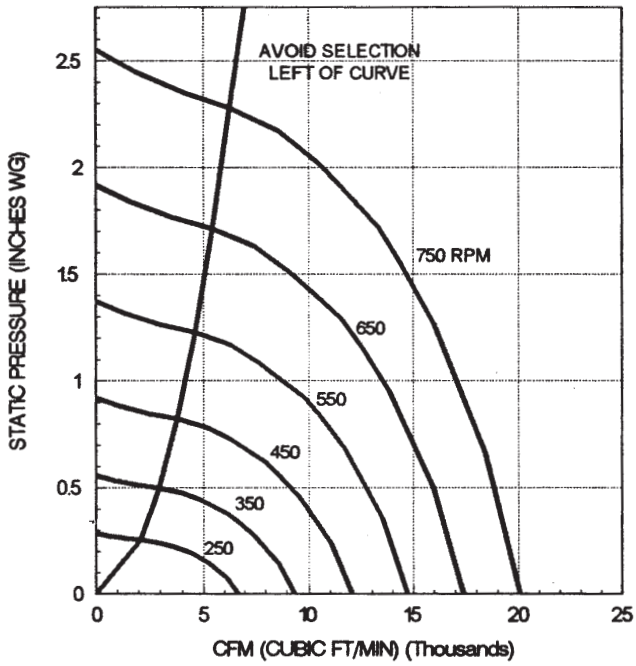
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VRBK 30
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10^{-12} WATTS OCTAVE BANDS 1	2	3	4	5	6	7	8	LWA
275	.000	64	61	60	60	56	49	43	37	61
375	.000	73	70	66	67	65	59	52	46	69
	.375	70	64	58	58	57	52	48	43	61
475	.000	78	78	73	72	71	66	60	53	75
	.375	77	74	67	66	65	61	56	51	69
	.625	77	72	65	63	62	59	54	50	67
575	.000	82	83	79	76	76	72	66	59	80
	.500	81	81	74	71	70	67	62	57	75
	.750	82	79	71	67	67	64	60	55	72
675	.000	85	88	84	80	80	77	71	64	84
	.500	85	87	81	76	76	73	68	62	81
	1.000	86	85	77	71	70	69	64	60	77
	1.250	86	85	77	71	70	69	64	60	77
775	.000	88	93	88	83	83	82	75	69	88
	.500	88	91	86	80	80	79	73	67	86
	.750	88	91	85	78	79	77	71	66	84
	1.000	88	90	83	76	76	75	70	65	83
	1.500	89	90	81	74	74	73	68	64	81

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet L_{WI} and $L_{WI}A$ sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VRBK 36
AIR PERFORMANCE



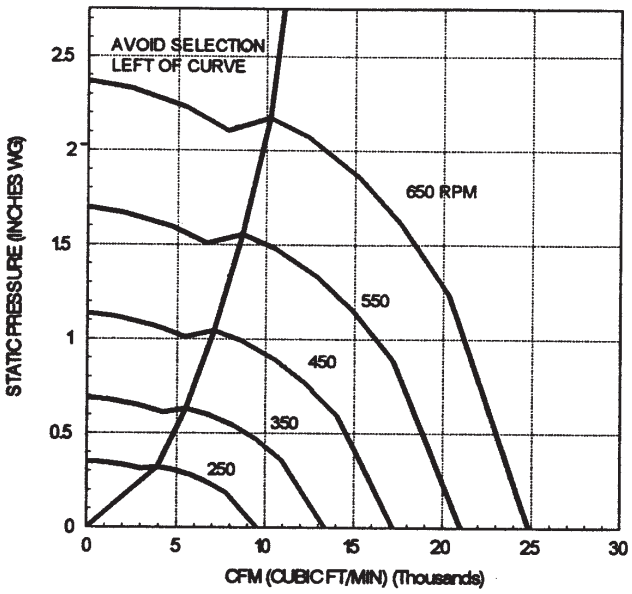
Performance certified is for installation type A - free inlet, free outlet.
Performance ratings (bhp) do not include transmission losses.
Performance ratings do not include the effects of accessories.

VRBK 36
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10^{-12} WATTS OCTAVE BANDS 1	2	3	4	5	6	7	8	LWA
250	.000	71	67	63	61	59	60	61	61	67
325	.000	78	75	70	67	65	65	66	66	73
	.375	73	68	63	61	59	56	51	47	64
400	.000	83	82	76	72	70	69	70	71	78
	.375	81	78	72	68	66	66	64	58	73
	.625	80	74	69	65	64	60	55	51	69
475	.000	87	87	82	77	74	73	74	74	82
	.500	86	84	78	72	71	70	70	64	78
	.750	86	81	75	70	69	67	64	59	75
550	.000	91	92	86	80	78	76	77	78	86
	.500	91	90	83	77	76	73	76	71	83
	1.000	91	86	80	74	73	71	68	63	79
	1.250	91	85	78	72	72	69	63	59	78
600	.000	93	94	89	83	80	78	79	79	88
	.500	92	93	87	80	78	76	78	74	86
	.750	92	92	85	78	77	75	77	72	85
	1.000	93	90	84	77	76	74	73	68	83
	1.250	93	89	82	76	75	73	69	65	81

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet L_{WI} and $L_{WI}A$ sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VRBK 42
AIR PERFORMANCE



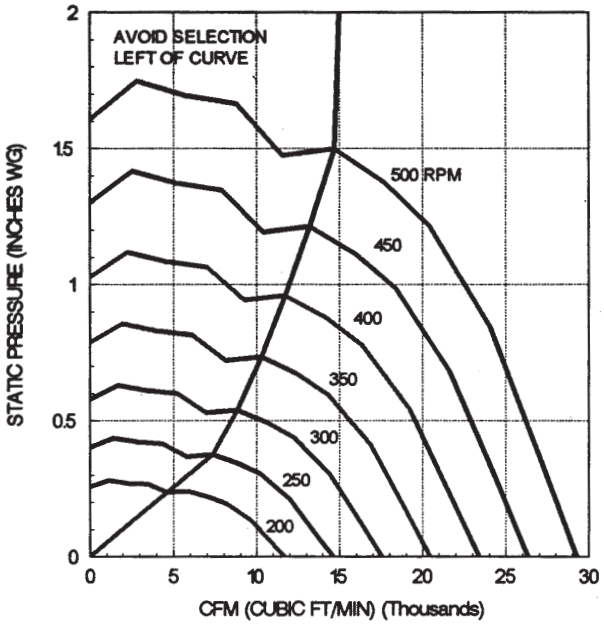
Performance certified is for installation type A - free inlet, free outlet. Performance ratings (bhp) do not include transmission losses. Performance ratings do not include the effects of accessories.

VRBK 42
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10^{-12} WATTS OCTAVE BANDS 1	2	3	4	5	6	7	8	LWA
215	.000	68	67	63	60	58	59	51	42	64
275	.000	75	73	70	67	63	65	59	51	71
	.375	72	68	63	61	58	54	48	42	64
335	.000	82	79	76	72	69	69	66	57	76
	.250	82	78	73	69	66	67	62	50	73
	.500	80	75	70	67	64	61	56	48	70
390	.000	87	83	80	76	73	71	71	62	80
	.375	87	82	77	72	70	69	67	55	77
	.750	86	78	74	70	68	64	59	52	73
445	.000	91	87	84	80	76	73	75	67	83
	.375	91	86	82	76	74	72	73	62	81
	.750	91	84	79	74	72	69	67	58	79
	1.000	91	82	78	73	71	68	62	56	77
500	.000	95	90	87	83	80	75	79	71	86
	.500	95	90	85	79	77	74	77	66	84
	.750	95	89	84	78	76	73	75	64	83
	1.000	95	87	83	77	75	72	70	62	82
	1.250	96	86	81	76	74	71	66	60	80

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} and $L_{wi}A$ sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

VRBK 48
AIR PERFORMANCE



Performance certified is for installation type A - free inlet, free outlet. Performance ratings (bhp) do not include transmission losses. Performance ratings do not include the effects of accessories.

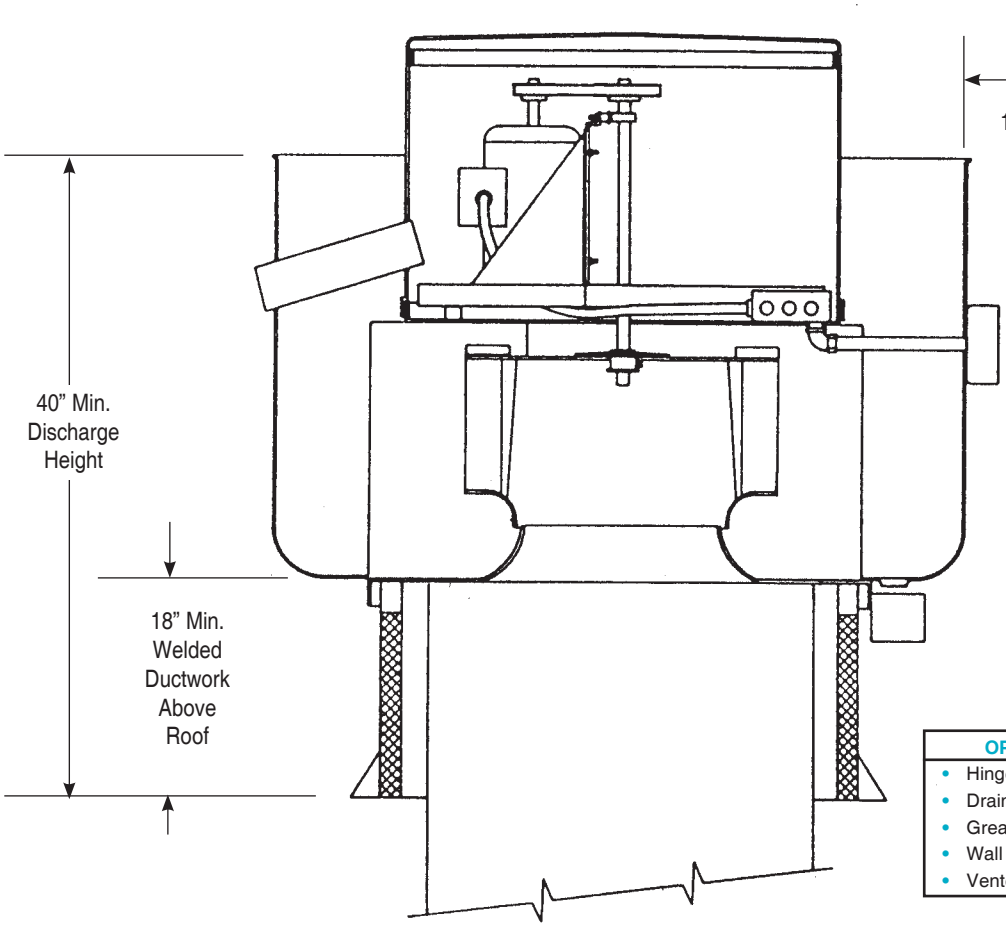
VRBK 48
SOUND PERFORMANCE

RPM	SP INCH W.G.	SOUND POWER RE 10^{-12} WATTS OCTAVE BANDS 1	2	3	4	5	6	7	8	LWA
200	.000	77	69	65	63	59	59	52	44	66
250	.000	83	77	72	69	65	64	59	52	72
	.250	82	74	66	64	62	60	53	45	68
300	.000	89	84	77	73	70	68	65	58	77
	.250	89	82	73	69	68	66	62	52	74
	.500	89	81	72	67	67	64	59	51	73
350	.000	93	89	81	77	74	71	70	63	81
	.375	94	87	78	72	71	69	66	57	78
	.625	94	87	77	70	71	68	64	56	77
400	.000	97	94	85	80	78	74	74	67	85
	.250	98	93	83	77	76	73	73	64	83
	.500	98	92	82	74	75	72	71	62	82
	.750	99	92	81	73	74	71	68	60	82
450	.000	99	98	89	84	81	77	77	71	88
	.250	100	97	88	81	79	76	76	69	87
	.500	100	96	87	79	78	76	75	67	86
	.750	101	96	86	78	77	75	73	65	86
	1.000	101	96	86	77	77	74	71	64	85

The sound power level ratings shown are in decibels, referred to 10^{-12} watts calculated per AMCA Standard 301. Values shown are for inlet L_{wi} and $L_{wi}A$ sound power levels for installation Type A free inlet, free outlet. Ratings do not include the effects of duct end correction. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

RESTAURANT INSTALLATION

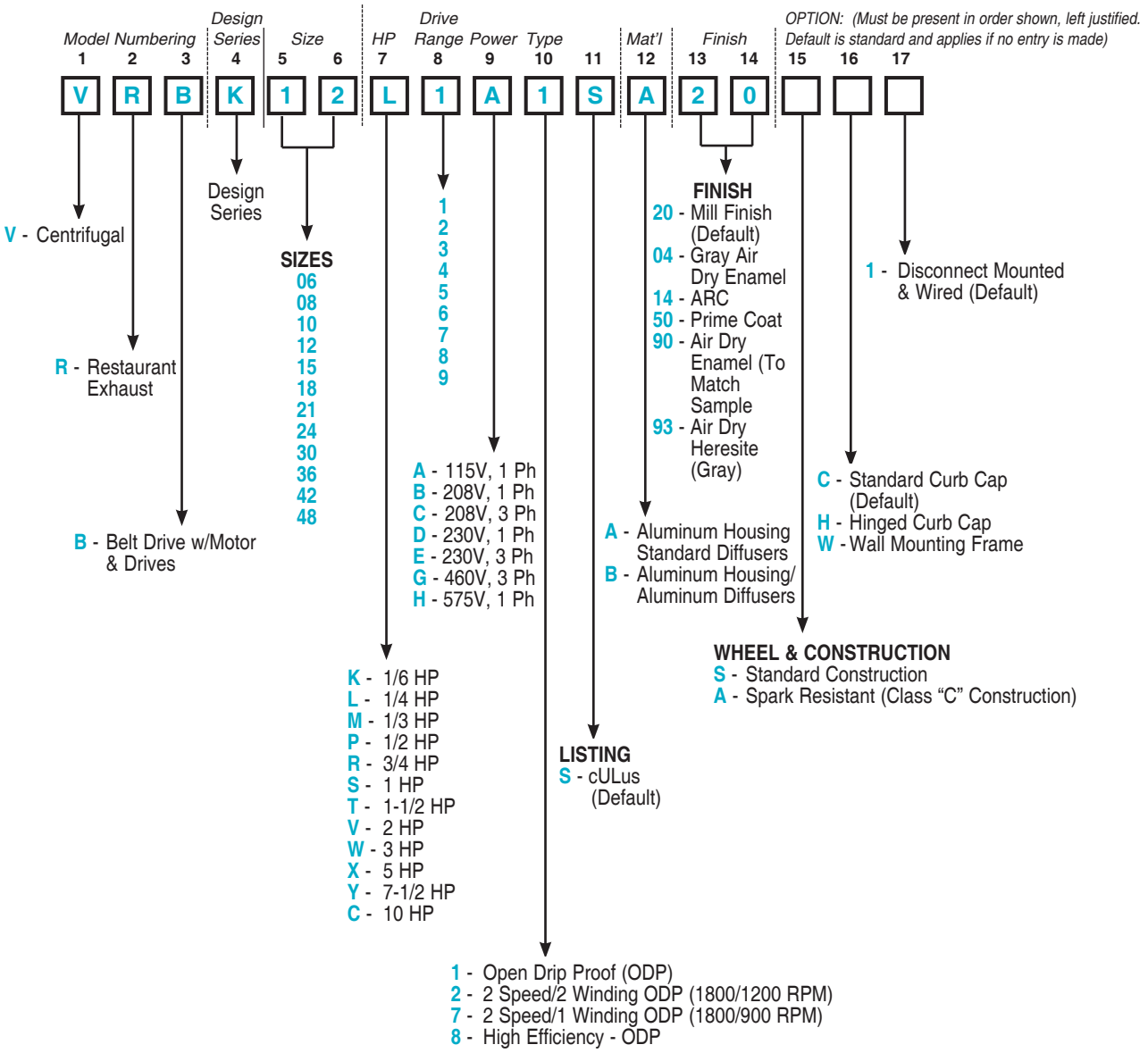
Typical installation - consult local codes for specific requirements.



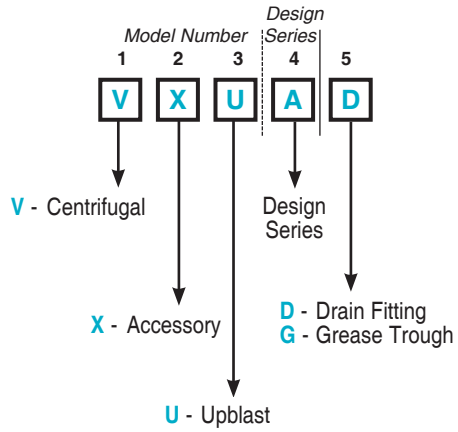
- ***Up discharge exhaust fan to be hinged for access.***
- ***Refer to NFPA-96 for clearance to combustibles.***
- ***Consult code requirements for floor and ceiling penetration requirements.***

OPTIONAL ACCESSORIES

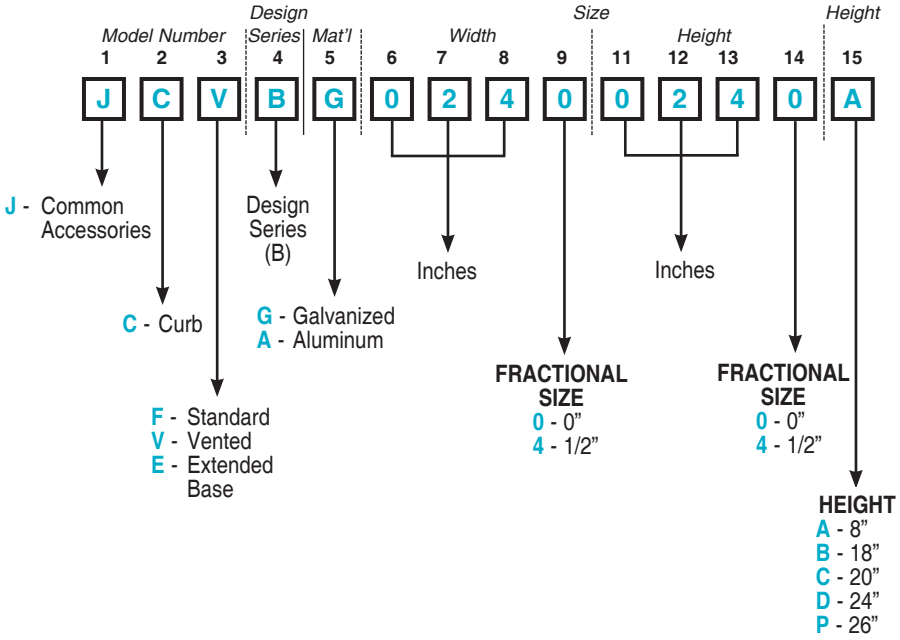
- Hinged Curb Cap
- Drain Fitting
- Grease Trough
- Wall Mounting Frame (Sizes 06-24)
- Vented Roof Curb



▼ Accessories



▼ Curbs



▼ Electrical Accessories